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# **EVERGREEN ENVIRONMENTAL MANAGEMENT, INC.**

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## **PRELIMINARY ASSESSMENT for the**

**FRED DEVINE DIVING & SALVAGE, INC.  
6211 N. ENSIGN STREET  
PORTLAND, OREGON 97217**

**ENV 01-06**

**USEPA SF**



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## NORTHWEST REGION

### PRELIMINARY ASSESSMENT for the

FRED DEVINE DIVING & SALVAGE, INC.  
6211 N. ENSIGN STREET  
PORTLAND, OREGON 97217

ENV 01-06

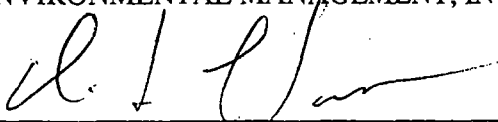
Prepared For:

Mr. Mick Leitz  
Fred Devine Diving & Salvage, Inc.  
6211 N. Ensign Street, Swan Island  
Portland, Oregon 97217

Prepared By:

EVERGREEN ENVIRONMENTAL MANAGEMENT, INC.



  
DAVID L. SAMPLES R. P. G.  
Registered Professional Geologist No. G1339

June 28, 2001

- No manufacturing or similar activities have ever occurred at the FDDS site. FDDS uses the upper floor of the office structure for their administrative functions. The ground floor is vacant. The eastern section of the warehouse structure is used by FDDS for storage and maintenance of their diving and salvage gear. The western section of the warehouse is leased to Atlantic Logistics, Inc for the storage of equipment removed from ships.
- Two former sub-tenants of the facility conducted off site industrial washing and site response and cleanup work. The former Pacific Coast Environmental (PCE) occupied part of the FDDS facility from 1989 to 1995. The former Smith Environmental Services (SES) occupied part of the FDDS facility from only 1995 to 1996.
- With the exception of two very minor incidents, one in 1995 and the other in 2000,, no known or documented releases of petroleum products or other hazardous substances have occurred to exposed soil, on to the pavement, into the catch basins, or into the lagoon at the FDDS site. Both incidents were reported to EPA's Emergency Response Notification System. The 1995 incident apparently involved the accidental loss of some oil stained absorbent pads from a torn garbage bag that fell into the lagoon from the FDDS dock. The materials were quickly retrieved. A small sheen was generated which quickly dispersed. The 2000 incident involved the accidental loss of approximately five gallons of paint into the river apparently from a barge. The spilled fluid was quickly removed,
- Based on the FDDS facility's location next to the lagoon, and also apparently based on a comparison of analytical results from one sediment sample (PSY12) collected by EPA next to the FDDS dock to other samples collected in the lagoon and river, EPA and DEQ consider the subject property a potential source of petroleum and other contamination to the lagoon and river.

After several site inspections and a review of the history of the FDDS and adjoining properties, it is EEM's opinion that the primary and logical sources of any detected contamination in the lagoon sediments adjacent to the FDDS property and in the Willamette River is from historical activities at the Swan Island Ship Yard and out flow from the City of Portland's storm water out fall (M-1) located immediately adjacent to the subject property.

- In regard to potential pathways of contaminants to the lagoon or river from the subject property, EEM believes there are only two direct pathways. These are from the catch basins into the storm sewer system, and from spills or releases from vessels tied up to the FDDS dock (Figure 4). Both potential pathways have been and are closely monitored and managed to prevent any petroleum or other contaminants from impacting the lagoon or river.
- DEQ has requested that FDDS generate a Scope of Work for the collection of site characterization soil, sediment and/or groundwater samples based on the determination of potential contaminant pathways to the lagoon and river. Based on a review of the current and historical uses of the FDDS property, EEM firmly does not believe that the subject property has been or is a source of petroleum hydrocarbon or other types of contamination to the sediments in the lagoon or river. Therefore, EEM does not recommend that any type of intrusive sampling be conducted at the site. Please refer to Sections 8.0 and 9.0 for text regarding this subject.

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- Site Survey Photographs
- Aerial Photograph - 1936
- Aerial Photograph - 1942
- Aerial Photograph - 1957
- Aerial Photograph - 1972
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#### Appendices

- Appendix A Plat Map and Legal Description
- Appendix B Historical Information
- Appendix C UST Decommissioning Documentation
- Appendix D DEQ Information
- Appendix E BES Information

**PHASE ONE ENVIRONMENTAL SITE ASSESSMENT**  
**for the**  
**FRED DEVINE DIVING & SALVAGE, INC.**  
**6211 N. ENSIGN STREET**  
**PORTLAND, OREGON 97217**

**A. INTRODUCTION**

Evergreen Environmental Management, Inc. (EEM) has been retained by Mr. Mick Leitz of Fred Devine Diving & Salvage, Inc. (FDDS) to complete a Phase One Environmental Site Assessment (PA) on the FDDS property located at 6211 N. Ensign Street in Portland, Oregon. The purpose of the PA was to identify recognized environmental conditions in connection with the site including the potential for possible site contamination from hazardous substances or petroleum products. This PA included, but was not limited to, a records review; interviews with current owners and/or occupants; a site inspection; and a written report.

The PA was also completed to provide information to the Oregon Department of Environmental Quality (DEQ) in regard to the agency's goal of identifying potential past and current sources of contamination to the Swan Island Lagoon and the Willamette River. The Portland Harbor Sediment study area is located between River Mile 3.5 and 9.2 and contains numerous industrial and municipal facilities with waste water out falls. Sediment sampling conducted in numerous locations in the lagoon and river by the US Army Corp of Engineers in 1997 prior to dredging activities detected various concentrations of contaminants such as PCBs, Polynuclear Aromatic Hydrocarbons (PAHs) and Metals. One of the sampling locations (PSY12) was on the north side of the FDDS dock. The Portland Harbor was added to the Superfund program in December of 2000. Currently the U.S. Environmental Protection Agency (EPA) and Oregon DEQ are cooperating in the site investigation work and search for Responsible Parties (RPs).

In the preparation of this report, EEM adhered to the standards as defined in ASTM Designation E 1527-2000; *Standard Practice for Environmental Site Assessments*. This standard was intended to satisfy one of the requirements needed to qualify for the innocent landowner defense position in regard to the Compensation Environmental Response, Compensation and Liability Act (CERCLA). This was accomplished by making "all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial or customary practices" to determine if hazardous substances or petroleum products were used there, and if those substances or hazardous wastes had been disposed of on site.

## **B. FILE REVIEW AND SITE RECONNAISSANCE**

### **1. SITE LOCATION AND DESCRIPTION**

The Fred Devine Diving & Salvage, Inc. (FDDS) property is located at 6211 N. Ensign Street in the Mocks Bottom area of north Portland, Oregon. The property (Tax Lot 600) occupies 5.74 acres which fronts Swan Island Lagoon which is part of the Willamette River. The property is owned by The Marine Salvage Consortium, Inc. A plat map and legal description of the property are included in Appendix A. Please also review Figures 1, 2, 3, 4 and 5. Drinking water and storm and sanitary sewer services are provided by the City of Portland.

As can be seen in the 1936 aerial photograph, Mocks Bottom was originally a low lying wet land area which was periodically flooded by the Willamette River. Starting in the 1930s, the City of Portland began building dry land areas by pumping river dredge material onto it. The dredge activities can clearly be seen in the 1942 aerial photograph. In the photograph, the dredge pipeline is dumping Willamette River sediment on or adjacent to the subject property. As can be seen in the 1972 aerial photograph, the property was still being built up with fill material nearly until the time of the office building construction in 1973.

The FDDS facility has one 7,000 square feet two story office structure built in 1973. A 14,000 square feet warehouse structure was built in 1976. In 1995, an additional 10,500 square feet was added on to the west side of the warehouse. The open areas of the property are primarily used for storage of FDDS equipment. However some of the open space is used by other parties for the storage of marine and construction oriented items such as a ship's engine and a large capacity crane. The dock which was built in 1984 is primarily used by FDDS for securing their work boats, barges and a floating workshop. The dock is also used by other parties for mooring private motor and sailing vessels such as the river excursion vessel "Sternwheeler Rose."

The office structure is a wood framed two story building with wood exterior. FDDS has always used the upper floor for administrative purposes. The ground floor has always been leased to other businesses. Currently the lower floor is unoccupied. The walls are wood paneling and/or sheet rock, the ceilings are predominantly suspended acoustical tiles. The flooring is carpet over a wooden sub-flooring on the grounds floor and carpet over light weight concrete on the upper floor. Lighting is with fluorescent fixtures.



The warehouse built in 1976 is occupied by FDDS and is predominantly used for the maintenance and storage of boats and gear used in their diving and marine salvage work. Small quantities of motor fuel and lubricating oil, as well as a small self contained parts washer, are located in the eastern section of the warehouse. One approximately 10 feet long and eight inch wide floor drain which is piped to the one on site oil/water separator is located in front of the paint room. According to FDDS, the drain was intentionally plugged inside the structure several years ago.

A small paint room is located in the middle of the eastern section of the warehouse. FDDS occasionally cleans and paints small equipment with aerosol paint cans. An eight inch wide floor drain runs about one half the length of the floor in this room. The floor drain is piped to a buried three chamber oil/water separator of approximately 400 gallon capacity. The separator is constructed of metal and was placed below ground in 1977. Discharge water from the oil/water separator is plumbed to the sanitary sewer system. However, according to Mr. Mick Leitz, the discharge line has always been kept closed by a valve thereby isolating the separator. The separator only occasionally receives runoff from the shop are and the small paint room. The separator is pumped out and cleaned at least once a year by an outside contractor such as Foss Environmental Services.

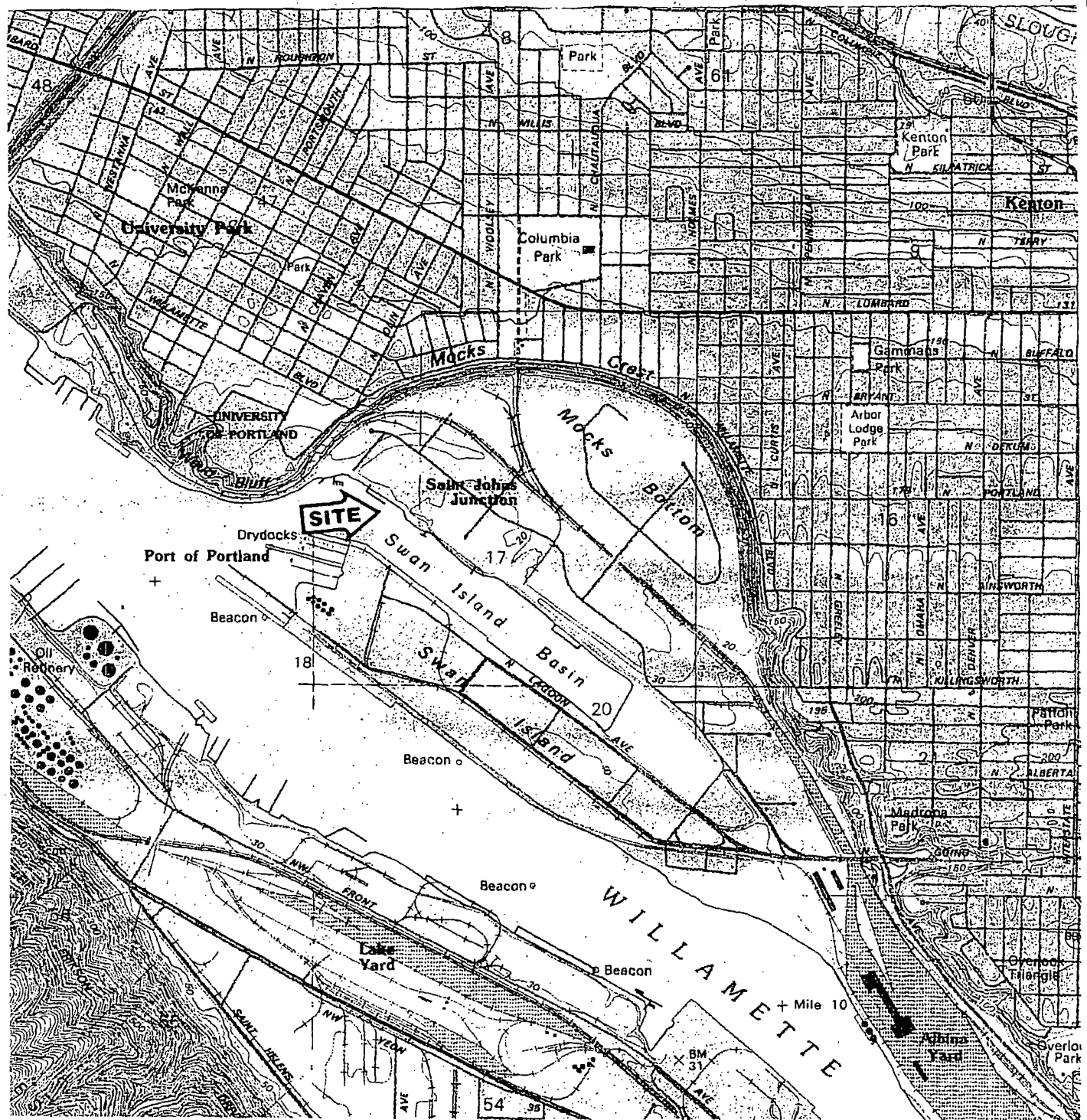
The western section of the warehouse which was built in 1995, was specifically constructed for the former Smith Environmental Services company, which went out of business within a year after the building was completed. That section of the warehouse was vacant for several years until FDDS leased it to Atlantic Logistics, Inc. in 2000 for the storage of miscellaneous equipment removed from ships at the Swan Island Ship Yard.

As can be seen in the 1998 aerial photographs, the subject property is immediately bordered to the north by the large United Parcel Service facility which has the address of 6707 N. Basin Avenue.

The subject property is partially bordered to the east by N. Ensign Street, and also by the Port of Portland Navigation Division facility located at 6208 N. Ensign Street. This facility oversees the mooring and operation of the river dredges. The City of Portland's storm water out fall M-1 discharges into the lagoon immediately adjacent to the southeast corner of the FDDS property.

The subject property is bordered to the south by the Swan Island Lagoon. Across the lagoon is the Swan Island Ship Yard.

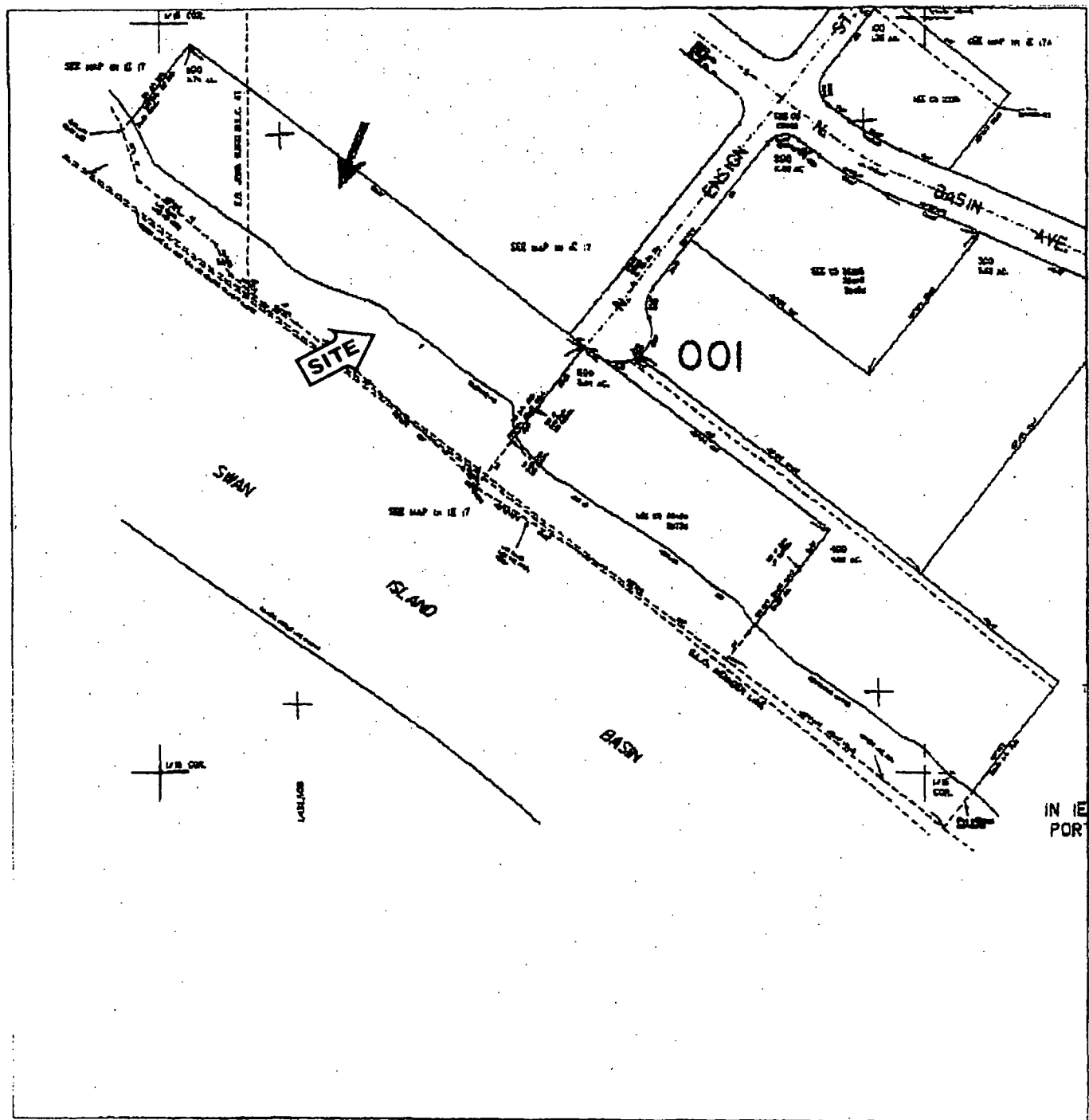
The project site is bordered to the west by U.S. Government property utilized by the Navy and Marine Corp for training and operations.



USGS Map Portland OR Quadrangle (Photo-Revised in 1990) Scale is 1 Inch equals 2,000 Feet

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**FIGURE NO. 1** Project #01-06  
**Project Location Map**  
Fred Devine Diving & Salvage Facility  
6211 N Ensign Drive  
Portland, Oregon



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**FIGURE NO. 2**      Project #01-06  
**Title Report Map**  
**Fred Devine Diving & Salvage Facility**  
**6211 N Ensign Drive**  
**Portland, Oregon**

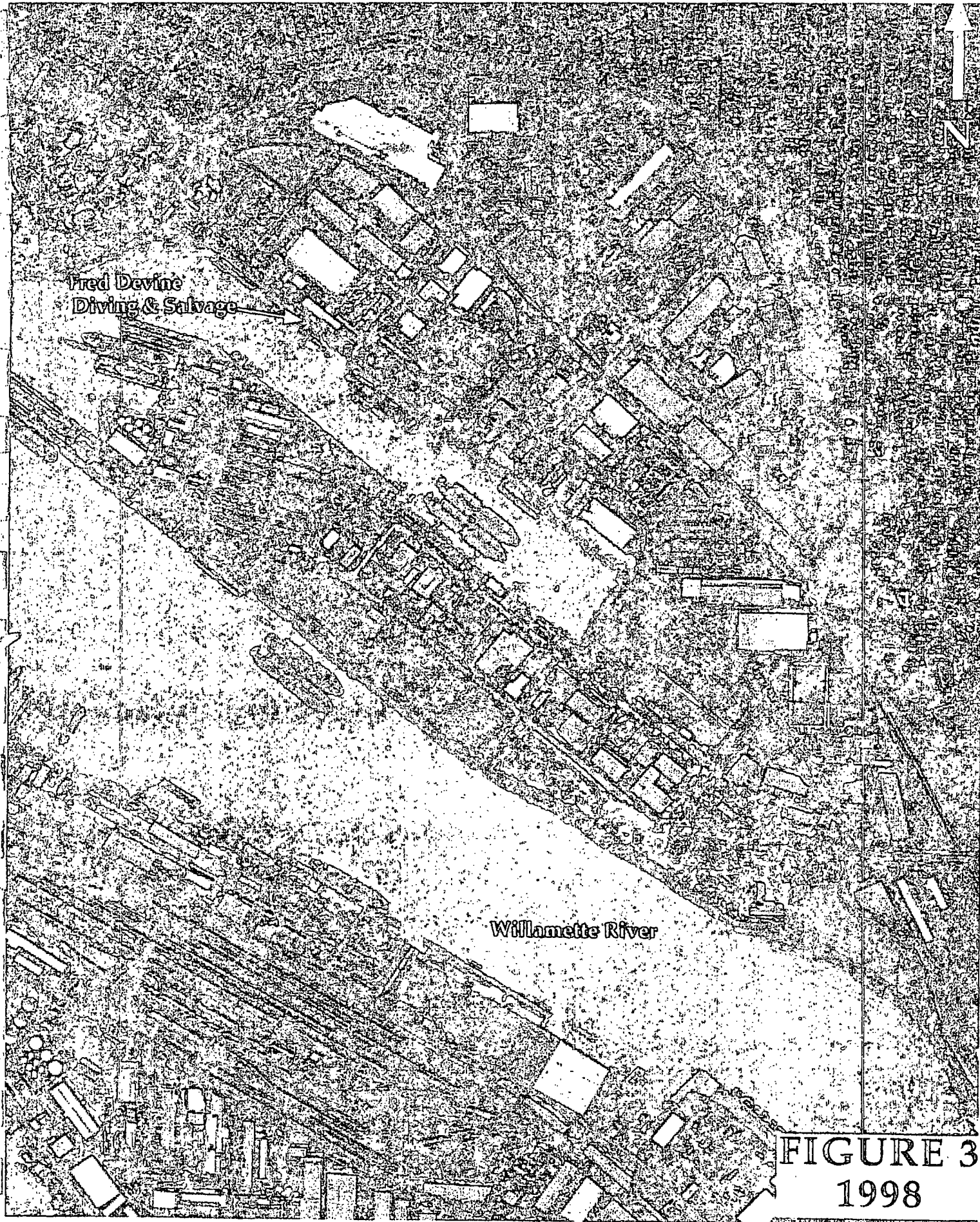
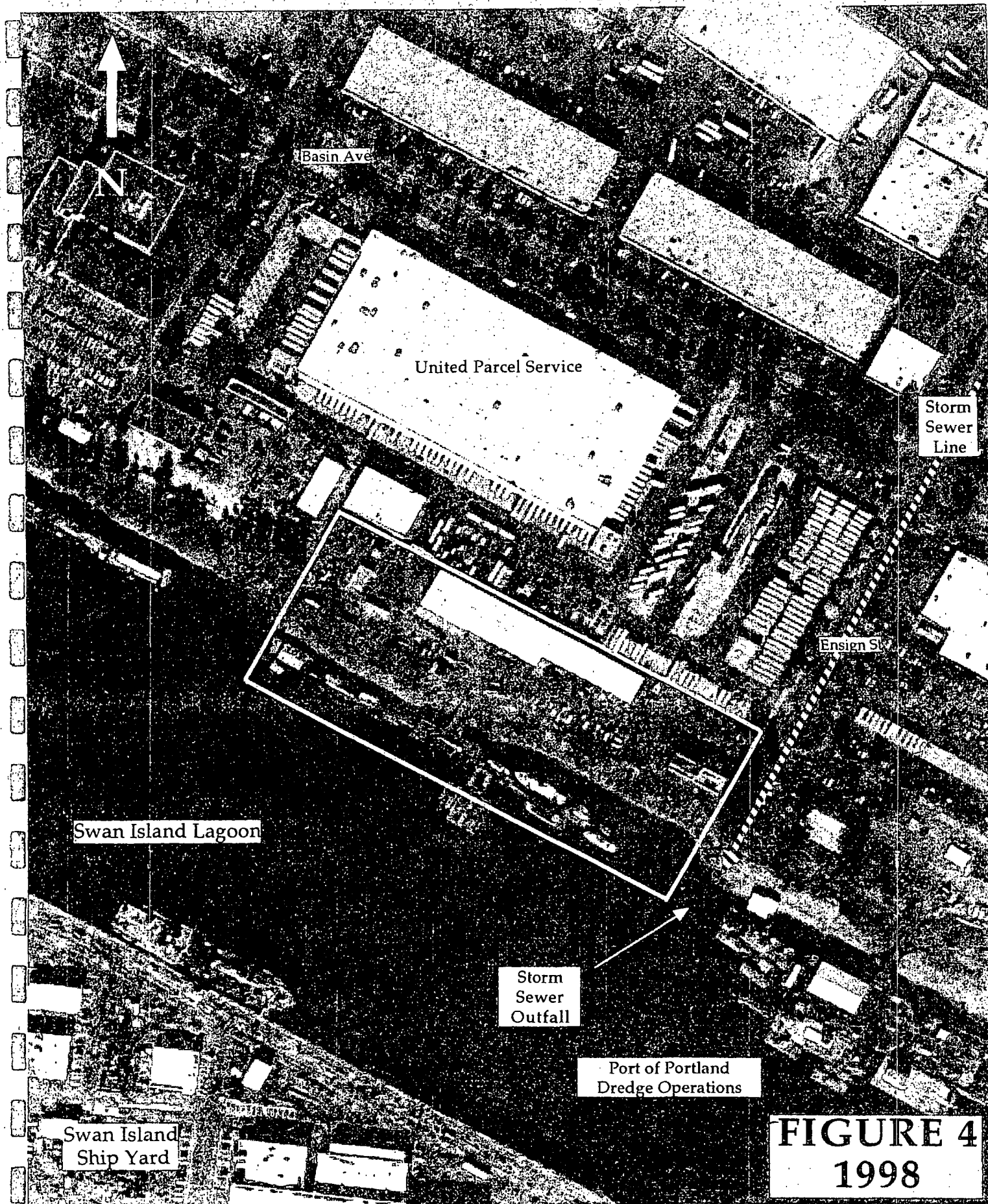
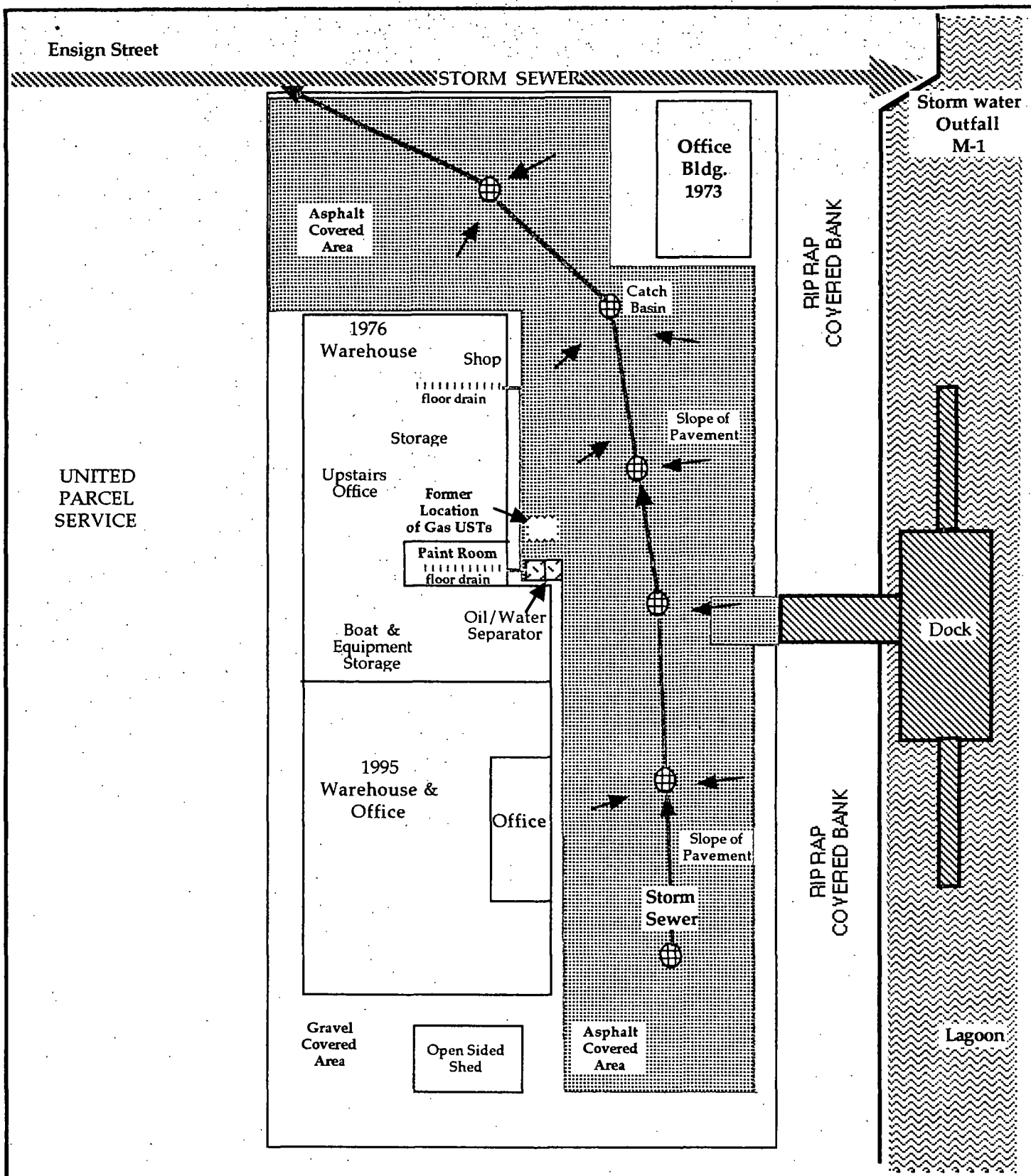


FIGURE 3  
1998







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**FIGURE NO. 5** Project #01-06  
**Project Site Map**  
Fred Devine Diving & Salvage Facility  
6211 N Ensign Drive  
Portland, Oregon

## 2. PHYSICAL SETTING

The project site is located at Township 1 North, Range 1 East, Section 17 of the Township and Range System in the Mocks Bottom area of north Portland, Oregon (Figure 1). The site is located at an approximate elevation of 20 feet above sea level immediately adjacent to the Swan Island Lagoon which is part of the Willamette River system.

Mocks Bottom was originally a low lying marsh land area which was periodically flooded by the Willamette River. Mocks Bottom lies below elevated areas of catastrophic flood deposits which were eroded by the Willamette River into a crescent shaped area. Starting in the 1930s, the City of Portland began pumping river dredge material into Mocks Bottom to raise the elevation in order to develop the area.

Average annual precipitation in the area is 50 inches and the average annual temperature is 53° F.

### Surface Water and Groundwater Flow

The topographic map (Figure 1) did not indicate the presence of any uncovered streams or surface drainage in the project site area. All runoff in the immediate area is channeled into the city's storm sewer system which empties into the Swan Island Lagoon immediately adjacent to the subject property's eastern property line.

Based on the topographic map for the project site area it appears highly probable that shallow groundwater would probably flow to the south-southwest towards the Swan Island Lagoon and the Willamette River. Shallow groundwater is probably at approximately 15 to 20 feet below ground surface in the project site area.

### Soils

According to the Soil Survey of Multnomah County, which was issued in August 1983, the soil type beneath the project site is identified as Urban Land on 0 to 3 percent slopes. In most areas of this complex the native soil has been significantly graded, cut, filled or otherwise disturbed. The original soil was typically comprised of brown loam and very fine sandy loam. In the project site area, the structures are sitting on approximately 15 feet of river sediments and other fill placed there by the City of Portland in order to permit development of the area.

### **3. HISTORICAL REVIEW OF SITE AND VICINITY**

To determine historical or previous uses of the subject property from its first developed use, or from 1940, whichever was earlier, numerous resources such as interviews with previous and current owners/occupants, historical data research, and examination of historical aerial photographs were utilized. The goal of the research was to identify indications of past activities that may have had a negative environmental impact at the project site.

#### **Review of Previous Level One Environmental Site Assessments**

EEM reviewed the 1992 Level One Environmental Site Assessment, and the 1993 and 1995 updates to that document, completed by Marine & Environmental Testing (M&ET). The author of this report was an employee of M&ET in 1995 and participated in the site inspection and the completion of the 1995 update report. The information presented in the previous reports was examined and verified with our own research. The 1936, 1942, 1957, 1972, 1986 and 1994 aerial photographs from the previous reports were utilized for this report.

#### **Interviews**

Title company documentation indicated that the subject property is owned by The Marine Salvage Consortium, Inc. EEM spoke on several occasions in February, March and April of 2001 with Mr. Mick Leitz, who is the President of Fred Devine Diving & Salvage, Inc., which has always been the primary tenant of the facility. According to Mr. Leitz, the property was first developed in 1973 with the construction of the two story office structure.

FDDS has always used the upper floor of the structure for their administrative functions. Part of the second floor has been leased to other companies such as the Portland Steam Navigation Company, which operates the motor vessel Sternwheeler Rose. The ground floor has always been leased out to numerous tenants who used the space only for sales or administrative purposes. Currently the ground floor is vacant.

The initial 14,000 square feet section of the warehouse/shop structure began and was completed in 1976. The building was solely occupied by FDDS until 1989, when Pacific Coast Environmental (PCE) leased some of the space. PCE specialized in industrial washing and they utilized the small office space inside the warehouse for administrative purposes and part of the interior of the structure for storage of their equipment. They also occasionally used part of the open area for overnight storage of wash water utilizing two small above ground tanks and 55 gallon drums. The stored material was removed or emptied the next day. PCE remained a tenant until they went out of business in early 1995.



In 1995, work began on the construction of the 10,500 square feet addition was added to the existing warehouse. The additional warehouse and interior office space were specifically constructed for Smith Environmental Services (SES). SES provided a multitude of environmental services such as industrial washing and hazardous waste profiling, transportation and disposal. Containers of hazardous waste were generally not kept on site. SES utilized the small office space inside the warehouse for administrative purposes and part of the interior of the structure for storage of their equipment. They occupied the new addition for approximately one year until going out of business in 1996. The additional office and warehouse space was vacant for several years until it was leased to Atlantic Logistics company in mid 2000 for the storage of miscellaneous items such as computers, electronic equipment and hardware which was removed from ships at the Swan Island Ship Yard.

A large two level dock which was built in 1984 extends from the property into the Swan Island Lagoon. The east side of the dock is currently used by three motor vessels and a sail boat for moorage. The west side of the dock is used by FDDS for mooring work boats and barges used in their diving and salvage work. Based on site inspections, EEM did not observe any quantities of petroleum products or other hazardous materials stored anywhere on the dock, or on the vessels and barges moored to the dock.

#### Oregon Historical Society

Various historic resources such as Sanborn Fire Insurance Maps and Polk City Directories at the Oregon Historical Society were reviewed for information regarding the past uses of the project site and surrounding properties, and the types of businesses that had been located there.

Sanborn Fire Insurance Maps for 1926, 1932, 1955 and 1965 were reviewed for coverage of the project site area. Unfortunately, the Mocks Bottom area was not covered by the Sanborn Maps.

The Polk City Directories were reviewed in five year intervals from 1935 to 1994 for occupancy history for the project site and surrounding properties. No listing for the site was recorded until 1975.

The 1975 directory indicated that Fred Devine Diving & Salvage was the primary occupant. Two other business which only leased office space were American International Yacht Importers and Reed Shaw Stenhouse Insurance Brokers

The 1980 directory indicated that Fred Devine Diving & Salvage was the primary occupant. Freightliner's Research & Development office was also listed but they only leased office space.

The 1985 directory indicated that Fred Devine Diving & Salvage was the primary occupant. Northwest Food Brokers was also listed but they only leased office space.

The 1994 directory indicated that Fred Devine Diving & Salvage was the primary occupant. Three other companies were also listed for the site. On Demand Technical company leased office space in the office building. Rose Sternwheeler company occupied office space but they also used the facility's dock for mooring the sternwheeler vessel. Pacific Coast Environmental occupied part of the eastern warehouse structure and used some of open area for storage. PCE went out of business in 1995.

#### City of Portland

EEM requested information for the project site from the City of Portland Office of Planning and Development Review regarding date of construction, use of the property and other historical data. The permitting data indicated:

1973	construction of two story office building.
1974	modifications to office building.
1976	construction of the first section of the warehouse, water service, sanitary and storm sewer connection.
1976	misc permits for construction of warehouse.
1977	add additional space to warehouse.
1977	install 4 new manholes, oil/water separator, etc.
1977	construction of upstairs office inside warehouse.
1984	partial test on storm and sanitary sewers.
1984	construct 30' by 120' timber dock and access trestle.
1995	add 10, 500 square feet to existing warehouse.

The City of Portland Fire Prevention Bureau reviewed their records to determine if any permits had been issued for the installation or decommissioning of underground storage tanks at the subject property. No records were found for the subject property.

### **Aerial Photographs**

Aerial photographs for 1936, 1942, 1957, 1972, 1986 and 1994 were reused from the previous Level One PAs completed by Marine & Environmental Testing Inc. These photographs had been obtained from the Army Corps of Engineers map center in Portland, Oregon, and from the Port of Portland. EEM obtained two 1998 aerial photographs for the site from Bergman Photographic Services. These photographs demonstrate land use for the project site and surrounding area during the 62 year period.

The 1936 aerial photograph appears to show the subject property area partially flooded. Most of the rest of Mocks Bottom also appears to be underwater. The Swan Island Lagoon is being used for storage of logs rafts. The former Portland Airport occupies all of Swan Island.

The 1942 oblique aerial photograph shows a Port of Portland dredge in the Willamette River pumping sediment to the subject property area. The work is probably being done to facilitate construction of a parking lot for ship yard workers. The Portland Airport has been removed and the Swan Island Ship Yard constructed for mass production of Liberty Ships and other vessels for use in World War Two.

The 1957 aerial photograph shows the subject and adjacent properties as undeveloped. Part of the subject property is covered with an asphalt parking lot that was used by Swan Island shipyard workers during World War Two. Swan Island Lagoon is being used for storage of logs rafts.

The 1972 aerial photograph was taken one year after the construction of the first phase of the UPS building and approximately one year prior to the construction of the Fred Devine office building. North Ensign Street has not been completed to the subject property yet. Swan Island Lagoon is being used for storage of logs rafts.

The 1986 aerial photograph shows the office building in the southeast corner of the property, and the first warehouse/shop structure in the middle of the property. The open area west of the warehouse/shop structure is used for storage.

The 1994 aerial photograph shows no significant change in the subject and immediately adjacent properties. The property to the east of FDDS does not appear to be occupied by the Port of Portland Navigation Division yet. A motor yacht and a float plane are secured at that facility's dock and a helicopter landing marking is visible in the parking area.

The 1998 aerial photographs show the subject and adjacent properties as they are currently configured. The 1995 western addition to the warehouse has been constructed. The property to the east is occupied by the Port of Portland Navigation Division and several barges can be seen. United Parcel Service still occupies the property to the immediate north. The property to the west is still occupied by the Navy and Marines.

#### **Historical Summary**

A review of the historical information for the subject property indicates the site was undeveloped until construction activities began for the two story office structure in 1973. In 1976 construction began on the 14,000 square feet eastern section of the current warehouse. In 1995 construction began on the 10,500 square feet western section of the current warehouse. The initial and main occupant of the property has been Fred Devine Diving & Salvage, Inc. which uses the property for administrative purposes and maintenance and storage of their diving and ship salvaging gear.

All of the first floor and part of the second floor of the office structure have been leased to other businesses since 1973. From 1991 to 1994, part of the eastern section of the combined warehouse structure was occupied by Pacific Coastal Environmental which provided environmental response and cleanup services. FDDS completely occupies that structure at this time. From 1995 to 1996, the western section of the warehouse was occupied by Smith Environmental Services which also provided environmental response and cleanup services. That section of the warehouse was vacant for approximately four years until Atlantic Logistics company leased it in mid 2000. Atlantic Logistics uses the warehouse to store miscellaneous items removed from ships.

#### **4. ON-SITE RECONNAISSANCE**

During the completion of the PA, David L. Samples, an Oregon Registered Professional Geologist (RPG) conducted site visits in February, March and April of 2001. During the site visits, EEM endeavored to identify indications of previous, current and potential environmental conditions that may have or might generate contamination from hazardous materials, wastes or processes. Specific areas of interest included the on-site use, storage and disposal of hazardous substances such as petroleum products, chemicals, asbestos, polychlorinated biphenyls (PCBs) and the presence of underground storage tanks (USTs). These items are discussed in the following sections.

During the site visits, the upper floor of the office building was occupied by FDDS, Portland Steam Navigation company and Fluid Power Systems. The ground floor of the office building was vacant. The eastern section of the warehouse structure was occupied by FDDS who used it for storage and maintenance of boats and other diving and salvage related gear. The western section of the warehouse structure was occupied by Atlantic Logistics, Inc. who uses the space for storage of miscellaneous items removed from ships that were being salvaged at the Swan Island Ship Yard. The open area in front of the warehouse building and to the west was predominantly used by FDDS for storage of machinery and salvage related equipment.

A large two level dock which was built in 1984 extends from the property into the Swan Island Lagoon. The east side of the dock is currently used by three motor vessels and a sail boat for moorage. The west side of the dock is used by FDDS for mooring boats and barges used in their diving and salvage work.

During the site visits EEM did not observe any obvious indications in the interior of the buildings, in the open storage areas, or on the dock that indicated the release of quantities of petroleum products or chemicals. Overall it appeared that FDDS has and continues to conduct prudent site maintenance practices in respect to situations that might generate potential environmental liability.

#### 4.1. ASBESTOS

As a part of the site reconnaissance, a visual inspection for the presence of asbestos-containing materials (ACMs) on the property was conducted. ACMs are any materials or products that contain more than 1% asbestos.

Currently, the Oregon Occupational Safety and Health Administration's (OR OSHA) 29 CFR 1910.1001 General Industry Asbestos Standard and 29 CFR 1926.1101 Construction Asbestos Standard requires that all thermal system insulation (TSI) and surfacing materials (SM) (sprayed-on, troweled-on or otherwise applied to surfaces) in buildings constructed no later than 1980 be presumed to contain asbestos. The building owner is required to treat all materials which meet the above criteria as if they contain asbestos and handle them in accordance with all of the requirements outlined in the above referenced asbestos standards. Any bulk sampling and/or evaluation performed to determine whether a material actually does or does not contain asbestos is required to be performed by a Certified Industrial Hygienist or an accredited Asbestos Building Inspector through the Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA).

In the office building the walls are wood paneling and/or sheet rock, the ceilings are suspended acoustical tiles and the flooring is carpet over wood sub-flooring. The construction materials in the office building do not appear to be typical of materials that might contain asbestos. All of these materials appear to be in good condition and no obvious exposure hazard was evident.

No asbestos containing materials were observed in the warehouse building which was constructed of steel framing with metal siding and roof. The small office areas built into both sections of the warehouse structure were constructed of wood framing, sheet rock and/or wood panel walls and suspended acoustical tile ceilings. No obvious asbestos containing materials were observed in the those areas.

As a standard precaution, EEM recommends that prior to any demolition or construction activities at the site, any suspect materials should be sampled and submitted for laboratory analyses to determine if the substances contain asbestos. If asbestos is present in materials to be removed then the material should be addressed in an appropriate manner to eliminate exposure risks. This may include removal by qualified asbestos removal workers.

#### **4.2. LEAD PAINT**

The presence of lead cannot be visually determined and can only be confirmed by sampling and laboratory analyses, or with the use of hand held X-Ray type instruments specifically manufactured for lead identification.

Considering the age and commercial use of the office and warehouse buildings it is possible that lead based paint has been used on them. However, no indications of the degradation of the paint such as peeling or flaking were observed at the site. Therefore, there does not appear to be an exposure hazard.

As a standard precaution, if any sections of the buildings are altered by demolition or construction activities, EEM recommends that all suspect materials be sampled and analyzed for lead content to insure safe working conditions and to determine proper debris disposal options.

#### **4.3. POLYCHLORINATED BIPHENYLS**

Ballasts, which are devices essential to the operation of fluorescent light fixtures and electrical transformers, often contain an oil-based fluid used for cooling and insulating. For many years polychlorinated biphenyls (PCBs) were a major ingredient in this fluid. Evidence from EPA-approved testing indicated that PCBs may be carcinogenic (cancer-causing) and may cause adverse reproductive effects in animals and humans.

The manufacture of PCBs was discontinued in the United States in 1976; however, products already manufactured with PCBs in closed systems, including transformers and fluorescent light ballasts, were allowed to be sold until 1979. In order to distinguish between older fluorescent light ballasts that contain PCBs and newer ones that do not, regulations now require the ballast manufacturer to place a notification on the label of non-PCB ballasts that says "CONTAINS NO PCBS" or "NO PCBS". Older ballasts containing PCBs manufactured prior to the ban will not have this notification on the label.

##### **Light Ballasts**

Many of the light fixtures in the office and warehouse buildings were fluorescent type. The light fixtures appeared to be in good condition and no leakage of oil was observed from any of the fixtures. As warranted the older light fixtures are replaced with new ones.

#### Transformers

Two pad mounted electrical transformers are located at the site. The transformer behind the warehouse has a sticker on it indicating that it did not contain PCBs, whereas no such sticker was observed on the transformer located on the east side of the office building. The transformers are owned by Portland General Electric (PGE) and they appear to be in very good condition. The maintenance and responsibility for any cleanup work as a result of leakage from the transformers is the responsibility of PGE.

No other obvious sources of PCBs were observed at the site.

#### **4.4. UNDERGROUND STORAGE TANKS**

##### Subject Property

The name and address of the subject property appears on the Oregon Department of Environmental Quality's list of registered underground storage tanks (USTs). The facility formerly had three gasoline tanks. Two 2,000 gallon gasoline tanks installed in 1975 and one 4,000 gasoline tank installed in 1979, were removed from the site in 1993. Based on the DEQ tank decommissioning Change in Service forms completed by the tank decommissioning firm, the tanks had not leaked. A copy of the tank decommissioning documentation is included in Appendix C.

##### Adjacent Properties

A review of Portland Fire Prevention Bureau records for the immediately adjacent properties indicated the property located to the east at 6208 N. Basin Street and once occupied by LifeFlight Heliport had one 4,000 gallon above ground tank used for fueling a helicopter. The site is now occupied by the Port of Portland Navigation Division which removed the tank from the site. The large United Parcel Service facility located to the immediate north decommissioned seven motor fuel and oil tanks in 1992. Two new 20,000 gallon fuel USTs were installed in 1992. Two additional 1,000 gallon tanks were installed at the UPS site. It is not known if the tanks are located above or below ground or what their contents are.

During the site visits, EEM observed what appeared to be two tank vent pipes protruding from the back of the UPS truck maintenance shop which is located immediately adjacent to FDDS's north property line. EEM contacted Ms. Janeen Adamo, UPS's Environmental Compliance Officer and inquired about the pipes and other tank related issues. No information was immediately available. In a letter dated March 29, 2001, EEM again requested information about their buried tanks, the locations of groundwater monitoring wells at the UPS site, and the location of their oil/water separators relative to the FDDS property line. UPS did not respond to EEM's request for the information.



#### **4.5. ABOVEGROUND STORAGE TANKS**

Several small capacity aboveground storage tanks which are occasionally used off-site during salvage work are stored outside the warehouse structure. These tanks are emptied prior to their return to the facility. No active aboveground fuel tanks were observed on the subject or adjacent properties. The UPS facility may have above ground tanks, but EEM's request for such information was not respond to.

#### **4.6. DRINKING WATER, IRRIGATION, GROUNDWATER MONITORING WELLS**

No obvious indications of drinking water wells, irrigation wells, or groundwater monitoring wells were observed on or immediately adjacent to the subject property. A review of Oregon Water Resources Department's well log data base did not indicate the presence of any type of wells at the site.

The United Parcel Service facility to the immediate north has several groundwater monitoring wells that were installed following the decommissioning by removal of several motor fuel tanks, one new oil tank and one used oil tank in 1992. According to documentation in DEQ's project folder for the site, impacted groundwater appeared to be limited to the UPS property and was below DEQ's cleanup guidelines.

#### **4.7. CATCH BASINS, DRYWELLS, SEPTIC FIELDS AND OIL/WATER SEPARATORS**

No drywells or septic fields exist at the site. All of the structures were connected to the City of Portland sanitary sewer system during their construction.

As indicated in Figure 5, six catch basins, which are plumbed into the City of Portland's storm sewer system, are located in the asphalt covered areas at the site. Each catch basin contains several feet of absorbent material beneath and above the water level in the device. No obvious indications of the presence of petroleum or other contaminants were observed in the catch basins. Please see Section 6.2 for additional information.

As indicated in Figure 5 one below ground three chambered oil/water separator of approximately 400 gallon capacity is located on the south side of the warehouse/shop structure outside of the small paint room. The device was placed in the ground in 1977. The approximately 10 feet long and eight inch wide floor drain in the adjacent small paint room discharges into the separator. Water out fall from the separator can be directed into the sanitary sewer system. However, the device has always been purposefully isolated by the closing of a valve. The interior of the separator appeared to be in very good condition. According to Mr. Leitz, the device

is rarely used and it is pumped out at least once a year by Foss Environmental Services or other similar firms.

#### **4.8. USE AND STORAGE OF PETROLEUM PRODUCTS AND CHEMICALS**

Minor quantities of motor fuel, lubricants and cleaning supplies are stored in the eastern section of the warehouse by FDDS. The fuel is for generators, pumps and other equipment used during their salvage work. Lubricants are used for the generators and pumps but also for the boats stored inside the structure. No significant petroleum stains were observed on the floor in any section of the total warehouse structure.

One approximately 50 gallon self contained parts washer that uses solvents is located in the eastern section of the warehouse. No obvious indications of spills from the device were observed. The parts washer is periodically serviced by Safety Kleen.

EEM did not observe any containers of petroleum products or other materials being stored on the dock that extends into the Swan Island Lagoon. The FDDS and other motor vessels that use the dock contain various quantities of fuel. The vessels are fueled by a small tanker truck that parks on the dock and runs a fuel line to the vessels.

## **5.0 REGULATORY COMPLIANCE ISSUES**

EEM assessed the current status of the project site regarding regulatory compliance issues. Specific areas of interest include Air Emissions Permits, Wastewater Discharge Permits and hazardous waste disposal procedures. Additionally, documentation concerning radon was reviewed.

### **5.1. AIR EMISSIONS**

No manufacturing activities occur at this site that generate air emissions which would require special permitting.

### **5.2. WASTEWATER DISCHARGE**

#### Sanitary Sewer Systems

No manufacturing activities occur at this site that generate unusual quantities of wastewater into the sanitary sewer system that would require special permitting.

#### Storm Sewer System

In regard to the storm water collection and system, as indicated in Figure 5 there are six catch basins in the asphalt covered area that collect surface runoff which is drained to the city's collector pipe which runs roughly north to south beneath N. Ensign Street. The city's main collector pipe discharges into the Swan Island Lagoon immediately east of the eastern property boundary (see photographs). According to Mr. Leitz, following a rainfall after a period of dry weather, petroleum sheens and discolored water are often visible in the lagoon from the out fall. The storm sewer system in the Mocks Bottom area drains numerous manufacturing and distribution facilities, many of which have large fleets of trucks and other equipment that utilize petroleum hydrocarbons and chemicals. Numerous spills to the storm sewer system in the Mocks Bottom area are documented in the EPA's Emergency Response Notification System (ERNS) database.

In a letter dated November 27, 2000, the City of Portland Bureau of Environmental Services (BES) requested FDDS to obtain a National Pollutant Discharge Elimination System Waste Discharge (NPDES) permit for their facility. A copy of the letter is included in Appendix E. BES reasoned that the materials stored in the open areas of the property present a "pollution potential" to the storm water system and thereby the Willamette River.

On February 21, 2001, BES collected a water sample from the storm water manhole located in the driveway to the subject property. A water sample was collected in that location because it was the last place storm water from only the FDDS property was accessible before it flowed into the city's larger collector pipe. The water sample was submitted for laboratory analyses for tests that are periodically required by facilities maintaining an active NPDES permit.

In a March 21, 2001, telephone conversation with Ms. Sabrina Alberg, the BES Environmental Technician who collected the storm water sample, she stated that only the pH of the water was slightly out of parameters. She suggested that equipment washing activities may be the cause of the altered pH.

On March 26, 2001, BES issued a letter report summarizing the sampling analytical results and their recommendations. A copy of BES's report is included in Appendix E. The letter report confirmed that no petroleum contaminants were detected and that only the pH of the water was out of range. The pH was 4.9 and the bench mark range is 5.5 to 9.0. Based on these sampling analytical results, BES has decided against requesting DEQ issue an NPDES permit.

### **5.3. HAZARDOUS WASTE GENERATION STATUS**

Activities at the subject property do not generate reportable quantities of hazardous waste.

### **5.4. RADON**

Radon is a naturally occurring odorless gas produced by the radioactive decay of the element radium. As a part of the natural process, radon slowly seeps from the soil. Outdoors, radon is not a problem; however, indoors, radon can enter buildings through basement foundation cracks and other openings. Exposure to high levels of radon over long periods of time can increase the risk of developing lung cancer.

Typically the Northwest Pacific Coastal Mountains and the Columbia Plateau consist primarily of volcanic basalts and are therefore low in uranium. However, granite rock containing radium was carried from eastern Washington State into western Oregon and Washington river valleys by the Missoula Floods that occurred thousands of years ago. This material was indiscriminately distributed as it fell from the flood waters. Consequently, it is possible for one building to have high levels of radon while the building next door has none.

The EPA recommends that action should be taken to reduce exposure to radon within homes and other buildings. This could involve installing vapor barriers in crawl spaces or under concrete floors of new houses and buildings, or repairs to floors to eliminate pathways for radon to enter, or by increasing ventilation in the affected areas.

The State of Oregon Health Division collected radon sampling data from 17 residential sites within the 97217 Zip Code area during radon abatement projects. Eight of these sites reported levels of radon above the EPA minimum action level of 4 pico curies per liter of air (4 pci/L). The maximum reading for a single sample was 10.2 pci/L, and the average reading for all of the sites was 2.8 pci/L.

Based on the sampling data the potential for the presence of radon creating an environmental or a health threat in the 97217 Zip Code area appears to be slightly higher than the average for the Portland area. However, because the sampled residences are located above Mocks Bottom, and because Mocks Bottom is essentially constructed of transported river sediment and fill, the applicability of the sampling data is questionable. Therefore, as a standard precaution, adequate ventilation should be maintained for all structures.

## **6. REGULATORY AGENCY FILE SEARCH**

As part of the PA, the current regulatory agency files listed below were reviewed for the name or the address of the project site, and also for surrounding properties, to help identify documented environmental problems generated at the subject property or the potential of migrating contamination from off site sources.

- DEQ Environmental Cleanup Site Information System (ECSI) as of 3/01.
- DEQ Confirmed Release Sites List as of 3/01.
- DEQ Open Solid Waste Disposal Permits (Landfills) as of 1997.
- DEQ Underground Storage Tanks Registered in Oregon as of 10/00.
- DEQ Underground Storage Tank Cleanup List as of 3/01.
  
- Oregon Health Division State Building Codes Division List of Properties Determined Unfit for Use Due To Drug Lab Activities, 3/01.
- Oregon State Fire Marshall Incident Reports as of 6/01
  
- EPA Hazardous Waste Handlers/Generators in Oregon as of 3/01.
- EPA Superfund (CERCLIS) as of 3/01.
- EPA Treatment, Storage, and Disposal (TSD) Facilities as of 3/01.
- EPA National Priority List (NPL) as of 12/00.
- EPA Emergency Response Notification System List (ERNS) as of 3/01.
- EPA Toxic Release Inventory as of 6/01
- EPA Corrective Action (CORRACTS) as of 6/01

## PROJECT SITE AND SURROUNDING PROPERTIES FILE REVIEW

The regulatory files were reviewed for the project site and the surrounding area within the approximate minimum search distances as established in ASTM Designation E 1527-2000 *Standard Practice for Environmental Site Assessments* process. The results of the records review, including names and addresses of the properties, are listed on the following pages.

### 6.1. ENVIRONMENTAL CLEANUP DIVISION

The Environmental Cleanup Site Information System (ECSI) listing was reviewed for sites within one-half mile of the subject property. Sites can be placed on this listing based on unconfirmed information. The following disclaimer appears on the DEQ listing, "Appearance in this report neither confirms nor denies the release of a hazardous substance at the facility; nor does it indicate whether the facility is contaminated or cleanup is necessary, currently underway or completed." Ten sites, including the subject property, were identified within the search area and are listed in Table 1.

TABLE 1  
ENVIRONMENTAL CLEANUP DIVISION SITE INFORMATION SYSTEM

NAME	ADDRESS	I.D. #
Fred Devine Diving & Salvage	6211 N. Ensign	2365
GI Trucking	5820 N. Basin	1840
Island Holdings	5885 N. Basin	260
Basin Ave Boat Dock Drum	6767 N. Basin	1275
Swan Island Drum #1	6767 N. Basin	1323
Swan Island Drum #2	6767 N. Basin	1324
US Coast Guard Facility	6767 N. Basin	1338
Automatic Vending	5001 N. Lagoon	1430
Crosby & Overton	Building Nine	877
Swan Island Portland Ship Yard		271

The Fred Devine Diving & Salvage (FDDS) property is listed in this database as a result of sediment sampling conducted in the Portland Harbor investigation area for the EPA. Varying concentrations of contaminants such as Metals, Semi-Volatile Organic Compounds (SVOCs) and Polynuclear Aromatic Hydrocarbons (PAHs) were detected in Swan Island Lagoon sediments near and adjacent to the FDDS property. Because the FDDS facility fronts the lagoon, it has been included in the EPA's and DEQ's investigation area to determine potential sources of contamination to the Portland Harbor study area.

The GI Trucking facility is up gradient located approximately 2,500 feet northeast of the subject property. The listing is regarding the discovery of diesel and bunker fuel at the site in 1993. Approximately 126 cubic yards of impacted soil were removed and disposed of. Groundwater was not encountered at the maximum excavation depth of 10 feet below ground surface. The site summary report indicates that DEQ wants additional site investigation work.

The Island Holdings, Inc. facility is also located approximately 2,500 feet northeast of the subject property. The listing regards the dumping of pesticide wastes into a storm water manhole in the 1980s and again in the 1990s. Apparently the Coast Guard and DEQ were involved in site response and cleanup work.

The Basin Ave Boat Dock Drum, Swan Island Drum #1 and Swan Island Drum #2 listings apparently are regarding the discovery of abandoned 55 gallon drums of potentially hazardous wastes. No significant information was included in the ECSI summary reports for all three listings. Therefore, EEM assumes that the drums were removed and properly disposed of by the DEQ or another party.

The US Coast Guard facility is located approximately 1,000 feet west-northwest of the subject property. The Coast Guard site is listed in the ECSI database because it also fronts the lagoon. Therefore, it has been included in the EPA's and DEQ's investigation area to determine potential sources of contamination to the Portland Harbor study area.

The Automatic Vending site is located on Swan Island across the Swan Island Lagoon from the subject property. The site is listed because an unknown volume of petroleum impacted soil is buried beneath an old structure and fill debris at the site. This site does not present a realistic threat to the subject property.

The Crosby & Overton site is located on Swan Island across the Swan Island Lagoon from the subject property. The listing is in regards to the possible spraying of PCB contaminated oil on the ground by Crosby & Overton personnel to control dust either at the Building Nine location on Swan Island or other locations. Crosby & Overton no longer exists. This site does not present a realistic threat to the subject



property, but may be a potential source of contamination to the lagoon and Willamette River.

The Swan Island Portland Ship Yard occupies most of the western portion of Swan Island which is located across Swan Island Lagoon from the subject property. The ship building and repair activities at the Ship Yard since World War Two are the primary potential source of contamination to the lagoon next to the FDDS property and to the Willamette River. A copy of the ECSI summary report for the Ship Yard is included in Appendix C.

#### 6.2. DEQ CONFIRMED RELEASES

The DEQ Confirmed Release List was developed from DEQ's Environmental Cleanup Site Information System and included facilities where an actual release had been confirmed. This list corresponded to the ASTM Standard Practice for PAs regarding State lists of hazardous waste sites. Prior to transferring a site from the unconfirmed Site Information System to the Confirmed Release List the DEQ notifies the current site owners and/or operators and allows 45 days for comments regarding the proposed listing.

The Confirmed Release Listing does not include all sites in Oregon that are in a cleanup process. Responsible property owners may perform cleanup activities without DEQ oversight. This listing was searched for sites within one half mile of the subject property. Two reported site was identified within the search area and are listed in Table 2.

TABLE 2  
DEQ CONFIRMED RELEASES

NAME	ADDRESS	LD. #
Automatic Vending	5001 N. Lagoon	1430
Swan Island Portland Ship Yard		271

Both of these sites are located on Swan Island across the lagoon. Therefore, they would not directly impact the subject property, but may impact the lagoon and the Willamette River.

#### 6.3. LANDFILLS

The DEQ maintains a listing of "Open Solid Waste Disposal Permits". According to ASTM Standard Practice, this listing was searched for landfills located within one-half mile of the site. No reported landfills were found within the search area.

#### 6.4. UNDERGROUND STORAGE TANKS

Only USTs governed by state and federal regulations are required to be registered with the State of Oregon DEQ. This does not include tanks containing heating oil for consumption on the site they are located, or non-commercial farm gasoline or diesel tanks of 1,100 gallons or less capacity. The existence of these USTs does not in itself constitute a threat of soil contamination to the property where they are located or to the subject property. ASTM standards for a search of registered USTs in proximity of a project site is "the project site and adjoining properties" only. During the survey it was determined that including the subject property, there were four facilities within the search area that had a registered UST with the State of Oregon. They are listed in Table 3.

**TABLE 3**  
**REGISTERED USTs ON AND ADJACENT TO THE SITE**

NAME	ADDRESS	ACTIVE	DECOM	ID#
Fred Devine Diving & Salvage	6211 N. Ensign	0	3	7447
United Parcel Service	6707 N. Basin	2	6	583
Naval Reserve Readiness Center	6735 N. Basin	0	3	5193
USCG Marine Safety Officer	6767 N. Basin	0	3	7790

All of the buried tanks at the subject property were decommissioned by removal in 1993.

In 1992, the UPS facility removed a total of six motor fuel and used oil tanks. Two new 20,000 gallon diesel fuel USTs were installed. Two 1,000 gallon tanks were also installed but because UPS did not respond to EEM's request for information, it is not known what these tanks are used for and where they are located.

The US Navy/Marine Corp Reserve Center at 6735 N. Basin Drive is located immediately west of the subject property. According to tank documentation records, three motor fuel tanks were removed from the site in 1993. The facility apparently does not have any active buried tanks.

The US Coast Guard Marine Safety facility at 6767 N. Basin Drive is located immediately west of the US Navy/Marine Reserve Center. According to tank documentation records, three motor fuel tanks were removed from the site in 1996. The facility apparently does not have any active buried tanks.

### 6.5. DEQ LEAKING UNDERGROUND STORAGE TANKS CLEANUP SITES

Locations of leaking underground storage tanks (LUST) reported to the DEQ are placed on their UST Cleanup List. ASTM standards for a search of leaking tanks from a project site is an area one-half mile from the project site. Nineteen sites were identified and are listed in Table 4.

**TABLE 4**  
**REPORTED UST CLEANUP SITES WITHIN ONE-HALF MILE OF THE SITE**

NAME	ADDRESS	START	FINISH	LD.#
<b>UP GRADIENT</b>				
United Parcel Service	6707 N. Basin	7/28/92	6/17/97	26-92-0109
SDS Co.	6712 N. Cutter	1/21/99	No info	26-99-0062
<b>CROSS GRADIENT</b>				
US Naval Reserve Center	6735 N. Basin	6/10/94	11/10/94	26-94-0198
US Navy	6735 N. Basin	4/3/93	No info	26-93-0085
US Coast Guard	6767 N. Basin	1/3/96	8/25/97	26-96-0002
Viking Truck Terminal	6100 N. Basin	7/5/95	6/17/96	26-95-0165
Cenex AG Inc.	6147 N. Basin	4/5/94	7/12/94	26-96-0031
Dallas & Mavis Co.	6220 N. Basin	5/7/90	5/2/94	26-90-0165
GI Trucking/Roadway	5820 N. Basin	8/3/93	3/22/96	26-93-0143
Roadway Express	5820 N. Basin	6/6/98	9/1/98	26-88-0022
Island Holdings	5885 N. Basin	5/5/93	11/5/93	26-93-0070
Lyden Farms	6135 N. Basin	1/11/94	No info	26-94-0012
Oregon Freightways	5949 N. Basin	7/27/89	12/21/90	26-89-0152
Pacific Detroit Diesel	5940 N. Basin	5/26/89	8/30/89	26-89-0101
Western Paper	6000 N. Cutter	6/25/90	6/25/90	26-88-0008
<b>DOWN GRADIENT</b>				
Automatic Vending	5001 N. Lagoon	11/18	6/16/97	26-91-0415
P.O.P Ship Repair AHOT	5555 N. Channel	4/20/93	No info	26-93-019
Pacific Detroit Diesel	5061 N. Lagoon	6/23/91	5/29/92	26-91-0237
Portland Ship Repair	5555 N. Channel	8/9/89	7/24/92	26-89-0166

EEM reviewed the DEQ files for the all of the up and cross gradient sites. With the exception of the SDS Company and Western Paper facilities, all of the other sites have No Further Action (NFA) letters which indicated that each site had been cleaned up to DEQ standards. Site investigations were apparently still proceeding at the SDS Company and Western Paper sites, but based on the information available it appeared that the petroleum contamination was restricted to the soil at both sites.

Therefore, based on the available information these sites do not appear to present a threat to the subject property. The down gradient sites do not present a direct threat to the subject property.

#### **6.6. STATE BUILDING CODES DIVISION - LISTS OF PROPERTIES UNFIT FOR USE DUE TO DRUG ACTIVITIES**

The State Buildings Codes Division maintains a list of properties that are considered unfit for use because they have been impacted by illegal drug manufacturing activities. This list was reviewed for the addresses of the subject property and immediately adjacent properties. No reported sites were identified within the search area.

#### **6.7. STATE FIRE MARSHALL INCIDENT REPORTS**

The State Fire Marshals Office maintains a Web Site list of incidents that fire departments have responded to. The list was reviewed for the 97217 area code. Numerous incidents in the Mocks Bottom area were responded to by the Portland Fire Bureau. Four incidents that were identified within the immediately project site area are identified in Table 5.

**TABLE 5**  
**STATE FIRE MARSHALL INCIDENT REPORTS**

NAME	ADDRESS	DATES	ID#
Foot of Ensign (Swan Island)	Ensign Street	11/10/98	980254
United Parcel Service	6707 N. Basin Avenue	3/16/92	920077
United Parcel Service	6707 N. Basin Avenue	4/2/91	910119
United Parcel Service	6707 N. Basin Avenue	1/23/92	920013

EEM contacted both the State Fire Marshall's office and the Portland Fire Bureau for information about the Foot of Ensign incident. The State Fire Marshal's office provided a database printout that indicated an estimated 25 gallons of an unknown fluid had exited the out fall into the lagoon. The Portland Fire Bureau could not readily provide documentation about any of the four incidents. However, an individual there did state that he recalled the Foot of Ensign incident regarded the

release of an unknown quantity of oil from the storm water out fall into the lagoon which created a large sheen. They apparently used Fire Boats to lay out a containment boom. The individual also stated that the Portland Bureau of Environmental Services (BES) was involved. EEM contacted BES and was to be provided computer database printouts of 13 logged spill events which they responded to at out fall M-1. That data was not provided by the time this report was finalized, but it will be included in Appendix E at a later date. Mr. John McGregor with BES stated that many of the incidents were petroleum releases but some were naturally occurring organic material that discolored the lagoon water. The State Fire Marshall's database printouts for the three incidents at UPS appeared to indicate responses to small fires and small spills of unknown materials that appeared to have been contained on site.

#### 6.8. EPA HAZARDOUS WASTE HANDLERS/GENERATORS

Businesses in the State of Oregon that generate and/or transport hazardous waste are required to apply to the Environmental Protection Agency for an Identification Number (EPA I.D. #). The names, addresses, and EPA I.D. #s of these businesses appear on a list of hazardous waste handlers issued by the EPA:

- (1) Large Quantity Generators (LQG) that generate more than 2,200 pounds of hazardous waste in one month;
- (2) Small Quantity Generators (SQG) that generate between 220 and 2,200 pounds of hazardous waste in one month, and
- (3) Conditionally Exempt Small Quantity Generators (CEG) that generate less than 220 pounds of hazardous waste in one month.

ASTM standards require that this list be searched for the address of the project site and adjoining properties. The subject property is not listed as a hazardous waste generator. Two adjoining properties that generated various quantities of hazardous wastes were identified within the search area and are listed in Table 6.

**TABLE 6  
HAZARDOUS WASTE HANDLERS/GENERATORS**

NAME	ADDRESS	STATUS	ID#
Port of Portland Navigation Division	6208 N. Ensign St	2	ORD 076431956
United Parcel Service	6707 N. Basin Ave	2	ORD 002774594

The Port of Portland facility is a small quantity generator. The material they dispose consist of spent cleaning solvents and used oil from their dredge maintenance operations. The United Parcel Service (UPS) facility is a small quantity generator. Their hazardous consist of spent cleaning solvents and used oil from their truck maintenance shop.

### 6.9. EPA CERCLIS

The Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) is a database used by the U.S. Environmental Protection Agency (EPA) to track activities conducted under its Superfund Program. Specific information is tracked for each individual site. Sites are added to the CERCLIS inventory that may have a potential for releasing hazardous substances into the environment. The EPA learns of these sites in various ways, including notification by the owner, citizen complaints, and state and local government identification.

After a site is added to the CERCLIS, it must be evaluated by conducting a Preliminary Assessment to determine if further investigation is warranted and whether the site should be:

added to the National Priorities List (NPL);  
recommended for no further action (NFA);  
or recommended for emergency consideration.

If the last notation in a CERCLIS entry is "NFA", it means "no further action" was recommended by the EPA. In some of these cases the EPA will pass the authority for further investigation or cleanup to the state environmental agencies. The CERCLIS database for Oregon was searched for sites located within one-half mile of the subject property. Two sites were found and are listed in Table 7.

TABLE 7  
CERCLIS (SUPERFUND) SITES

NAME	ADDRESS	STATUS	ID#
Port of Portland Ship Repair Yard	Swan Island	Site has been incorporated into the Portland Harbor Sediment NPL site	Superfund ID# 1001275  EPA Facility ID # OR0987172608
Portland Harbor Sediments	Between RM 3.5 and 9.2	Active NPL Site	Superfund ID# 1002155  EPA Facility ID # OR0001297969

Please see the text in the following section.

#### 6.10. EPA NATIONAL PRIORITIES LIST

The National Priorities List (NPL) under CERCLA is part of the National Oil and Hazardous Substances Contingency Plan (NCP). The purpose of the NPL is to identify releases of hazardous substances, and by doing so, to guide the EPA in determining which superfund sites warrant further investigation to assess the risk to public health and the environment. The EPA has determined, after investigation, that these sites may present a long-term threat to public health and the environment. The EPA uses the Hazard Ranking System to evaluate a site and calculate a score based on an actual or potential threat of release of hazardous substances to air, surface water, or groundwater. This score is a primary factor when deciding if a site should be placed on the NPL. Sites on the NPL are eligible for remedial action using federal money from the Superfund, which is a trust fund created under the Comprehensive Environmental Response, Compensation, and Liability Act. The EPA database for NPL sites located within one mile of the subject property was reviewed and two sites were found. These are listed in Table 8.

**TABLE 8**  
**EPA NATIONAL PRIORITIES LIST SITES**

NAME	ADDRESS	STATUS	ID#
Port of Portland Ship Repair Yard	Swan Island	Site has been incorporated into the Portland Harbor Sediment NPL site	Superfund ID# 1001275 EPA Facility ID # OR0987172608
Portland Harbor Sediment	Between RM 3.5 and 9.2	Active NPL Site	Superfund ID# 1002155 EPA Facility ID # OR0001297969

Sediment sampling conducted by Port of Portland adjacent to the Swan Island Ship Yard prior to 1997 detected various concentrations of contaminants such as arsenic, mercury, pesticides and semivolatile organic compounds. The contamination is believed to be the result of ship building and repair work at the ship yard since World War Two. As a result of the findings, the US EPA reviewed the site for potential Cerclis listing. Because of similar site investigation work in other areas of the Portland Harbor, the Port of Portland Ship Yard study site was incorporated into the Portland Harbor Sediment site.

The Portland Harbor Sediment study area is located between River Mile 3.5 and 9.2 and contains numerous industrial and municipal facilities with waste water out falls. Sediment sampling conducted in numerous locations by the US Army Corp of Engineers in 1997 prior to dredging activities detected various concentrations of contaminants such as PCBs, Polynuclear Aromatic Hydrocarbons (PAHs) and Metals. The Portland Harbor was added to the Superfund program in December of 2000. Currently the US EPA and Oregon DEQ are cooperating in the site investigation work and search for Responsible Parties (RPs).

Because the subject property fronts the Willamette River (Swan Island Lagoon), DEQ is requiring Fred Devine Diving & Salvage, Inc, to a complete a Preliminary Assessment (PA) report to determine the likelihood that historic and current site activities at the subject property has contributed to the contamination to river sediments. This Phase One Environmental Site Assessment as well as other documentation are to be submitted to DEQ to fulfill the agency's request for a PA.

#### **6.11. EPA TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITIES.**

The TSD listing for Oregon was searched for facilities located within one mile of the site. No reported sites were identified within the search area.



#### 6.12. EPA EMERGENCY RESPONSE NOTIFICATION SYSTEM SPILL REPORTS

EPA's Emergency Response Notification System (ERNS) list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity is maintained at the National Response Center. Notification requirements for such releases or spills are in 40 CFR 302.6. The spill information provided on the ERNS list has not been verified by the U.S. EPA, Region 10.

The NRC Internet database was queried for releases in the project site area. For the Portland, Oregon area, 630 release reports since 1990 were logged. EEM reviewed the database and observed numerous minor spill reports for the Mocks Bottom area and at the Swan Island Ship Yard which generally involved the release of petroleum products that often went into the storm sewer system, or straight into the lagoon or the Willamette River. Because there were so many, only a few of the release reports are listed in Table 9. The first four listings are the only reports that have either FDDS or PCE listed as the responsible party. Copies of the reports are included in Appendix D.

TABLE 9  
EMERGENCY RESPONSE NOTIFICATION SYSTEM SPILL REPORTS

INCIDENT LOCATION	RESPONSIBLE PARTY	DESCRIPTION	INCIDENT REPORT #
Swan Island Ship Yard Lagoon across from Fred Devine Diving & Salvage facility 6211 N. Ensign St.	Pacific Coast Environmental	1993 - Apparently PCE allowed approx. 50 gallons of diesel or ballast water to go into Willamette River.	92949
Fred Devine Diving & Salvage 6211 N. Ensign St.	Pacific Coast Environmental	1995 - No free product release. Apparently used absorbent pads from a bag with a split in it fell into the lagoon from the dock and generated a small sheen.	282547
Fred Devine Diving & Salvage 6211 N. Ensign St.	Fred Devine Diving & Salvage	1996 - Apparently a pallet fell off a crane causing approx. 5 gallons of paint to fall into the river.	349208
Swan Island Ship Yard Dry Dock #1	Fred Devine Diving & Salvage	2000 - Approx 3 gallons of hydraulic oil (actually vegetable oil) spilled into the river from a broken hose.	549281

Swan Island Ship	Port of Portland	1993 - Approx 50 gallons of hydraulic oil from a broken hose leaked into the Willamette River.	187617
United Parcel Service 6707 N. Basin	United Parcel Service	1993 - Broken hydraulic hose fitting. Approx. 35 gallons of oil spilled onto pavement. Spill cleaned up.	170288
Roadway Express 5820 N. Basin	Roadway Express	1990 - Unknown quantity of unknown liquid floating on rainwater going into the storm sewer system.	9067

Only two of the incidents may have involved the subject property. Both incidents were insignificant. Apparently in 1995 a bag of used absorbent pads from a Pacific Coast Environmental (PCE) job at the Swan Island Ship Yard was sitting on the FDDS dock. The bag had a tear in it which allowed some of the recovered oily material to drip into the lagoon and cause a sheen. There was no free product release. In 2000, apparently a pallet fell off of a crane and dumped about 5 gallons of paint into the river. The spill was quickly cleaned up.

Two of the listed incidents involved accidental releases of petroleum products into the river at the Swan Island Ship Yard during work conducted by Pacific Coast Environmental and Fred Devine Diving & Salvage. These two incidents and numerous others are typical of small work related spill releases at the ship yard facility.

The United Parcel Service and Roadway Express incident reports were the closest such events to the FDDS property. They appear to be typical of the numerous spill reports in the Mocks Bottom area.

#### **6.13. EPA TOXIC RELEASE INVENTORY**

The Emergency Planning and Community Right to Know Act of 1986 (EPCRA) promotes planning for chemical emergencies and the public's right to know about toxic and hazardous chemicals in their communities. A core provision of this Act is the establishment of the Toxic Release Inventory (TRI), a national database identifying facilities, chemicals manufactured and used at those facilities, and the annual accidental and routine releases of these materials. EEM reviewed EPA's Toxic Release Inventory web site for Oregon. Neither the subject nor adjacent properties on Mocks Bottom and Swan Island were discussed.

#### **6.14. EPA CORRECTIVE ACTION (CORRACTS)**

Corrective Action (CA) is an EPA program designed to investigate and guide the cleanup of any contaminated air, groundwater, surface water, or soil from hazardous waste management of spills or releases into the environment. These releases of hazardous waste and hazardous constituents is a result of the past and present activities at RCRA-regulated facilities. EEM reviewed EPA's Corrective Action web site for information regarding the subject and other properties in the Mocks Bottom and Swan Island areas. The information in this web site essentially duplicated previous research efforts. No new or useful information was obtained from this system.

## **7. DISCUSSION OF SUBJECT PROPERTY IN RELATION TO PORTLAND HARBOR SUPERFUND LISTING**

In respect to the Portland Harbor Sediments Superfund listing, based on past and current site inspections and historical research, EEM does not believe the Fred Devine Diving & Salvage property has been the source of any of the numerous contaminants detected in the sampled sediments from the Swan Island Lagoon or the Willamette River. The FDDS facility has only existed at the site since 1973 and past site activities do not appear to have existed that would have generated environmental liability. Whereas the Swan Island Ship Yard has operated since approximately 1942 and is a known source of contamination to the lagoon and river. Additionally, the use of the Willamette River for shipping and industrial purposes has occurred since the late 1800s. EEM also does not believe the current utilization of the subject property by FDDS or its tenants present a realistic or significant threat to the soil, groundwater or the surface water in the Swan Island Lagoon or the Willamette River.

### **On Site Potential Contaminant Sources**

In regard to potential pathways of contaminants to the lagoon or river from the subject property, EEM believes there are only two direct pathways. These are:

- from the catch basins into the storm sewer system, and
- from spills or releases from vessels tied up to the FDDS dock (Figure 4).

### **Storm Sewer System**

The storm sewer system is fed by six catch basins in the asphalt covered parking lot as well as roof runoff from the warehouse and office structures. The storm sewer piping runs west to east through the asphalt covered area in front of the warehouse and office structures. The asphalt covered area is sloped between the buildings and the edge of the bank in such a manner that all surface runoff is channeled into the catch basins. Absorbent booms are placed in each catch basin to filter the water before it enters the storm sewer piping. The storm sewer piping exits the property beneath the road entrance from N. Ensign Street and then connects with the city's larger storm sewer collector pipe that runs north to south beneath N. Ensign Street. As indicated in Figures 3 and 4 and the site photographs the collector pipe (M-1) discharges into the lagoon immediately east of the subject property's east property line.

Based on site inspection and a review of the operations at the FDDS property, it is EEM's opinion that the likelihood of a release of petroleum products, chemicals or other contaminants to the catch basins is highly improbable. Most of the items or equipment stored in the open storage areas are static or inert items such as hoses, large rocks, and old and unused mechanized equipment. Some modern mechanized equipment used in the diving and salvaging work is periodically stored on the asphalt covered area and also in the gravel covered area immediately west of the warehouse.

EEM inspected this equipment and observed that it appeared to be in very good condition and that no obvious indications of leakage of fuel or lubricants had occurred or was occurring from them.

With consideration that the catch basins and the storm sewer system represent the only direct pathway to the lagoon from the land section of the FDDS property, EEM generated several recommendations in Section 9.0 that should reduce the potential of surface releases occurring from the site.

#### Docking Facility

The use of the dock, which was built in 1984 represents the most direct potential pathway for pollutants into Swan Island Lagoon and the Willamette River. The east side of the dock is currently used by three motor vessels and a sail boat for moorage. The west side of the dock is used by FDDS for mooring boats and barges used in their diving and salvage work. Based on site inspections, EEM did not observe any quantities of petroleum products or other hazardous materials stored in containers anywhere on the dock, or on the vessels and barges moored to the dock. Fueling of the vessels is accomplished by backing a small tanker truck onto the dock and running a small diameter hose to the vessels. According to Mr. Leitz, no releases or spills of fuel have ever occurred during fueling operations.

A condition of use by private vessels tied up to the FDDS dock is that significant maintenance work, such as applying or removing paint or engine work cannot occur at the dock.

With respect to potential releases from the dock area, EEM has made several recommendations in Section 8.0 that should reduce the potential of releases into the lagoon.

#### Off Site Potential Contaminant Sources

Based on site visits and a review of DEQ and other documentation, there are three potential contaminant sources that might have or may impact the lagoon adjacent to the Fred Devine Diving & Salvage property. These are in order of significance:

- the Swan Island Ship Yard located to the south across Swan Island Lagoon,
- the City of Portland Storm Sewer Out Fall which is located immediately east of the eastern property boundary, and
- the United Parcel Service (UPS) facility located immediately to the north and up gradient of the subject property.

#### Swan Island Ship Yard

The past, and possibly the current activities at the Swan Island Ship Yard present the most significant environmental liability threat to the FDDS property of any of the other surrounding properties, especially in respect to the Portland Harbor Sediments Superfund listing. EEM believes there is a high probability that the majority of the contaminants detected in the sediments from the lagoon and the section of the Willamette River near the subject property is a result of ship building and maintenance work at the ship yard.

There is a high probability that the sediments adjacent to the FDDS facility have been mixed with contaminated sediments from areas closer to the ship yard as a result of the disturbance of lagoon and river sediments during the moving of ships in and out of the lagoon by tug boats. Mr. Leitz stated that they routinely observe that when tug boats are used to maneuver ships into the lagoon, significant propeller wash is generated that stirs up and redistributes the sediments in the lagoon. Therefore, EEM believes the detection of contaminated sediments adjacent to the FDDS property is not indicative of any historical or current activities at the subject property.

#### City of Portland Storm Sewer Out Fall M-1

As indicated in the site photographs and the 1998 aerial photograph, a large capacity storm sewer pipe discharges into the Swan Island Lagoon immediately adjacent to the eastern property line of the FDDS property. The storm sewer system in the Mocks Bottom area drains numerous manufacturing and distribution facilities, many of which have large fleets of trucks and other equipment that utilize petroleum hydrocarbons and chemicals. Numerous spills to the storm sewer system in the Mocks Bottom area are documented in the EPA's Emergency Response Notification System (ERNS) database.

The effluent from the storm sewer out fall M-1 flows along the shoreline next to the FDDS property and also mixes with the lagoon and river water. Mr. Leitz stated that they often observe petroleum sheens and discolored water after a rain storm preceded by a dry period. Therefore it entirely possible that numerous contaminants are being deposited into the lagoon and specifically next to the FDDS property by the storm sewer system.

#### United Parcel Service

The UPS facility is located immediately north and up gradient of the subject property. Because of UPS's utilization of hundreds of trucks and large capacity buried tanks and its proximity to the FDDS property and lagoon, EEM considers it to be a potential source of contamination. The two potential sources of contamination from the UPS facility are:

- surface releases into the storm sewer system of fuel and oil from the hundreds of trucks at the facility.
- releases of petroleum products into the soil and groundwater from their buried fuel and oil tanks and associated piping.

The potential release of varying quantities of diesel fuel and motor oil from the numerous UPS trucks into the catch basins and ultimately into the storm sewer system may add to the concentrations of petroleum hydrocarbons in the lagoon water. It is not known if UPS has a storm water management system that captures petroleum and other contaminants before they enter into the storm sewer system.

Because the FDDS property is down gradient of the UPS facility, the possibility exists that undetected releases of petroleum products from two 20,000 gallon buried diesel USTs and two other 1,000 gallon tanks could migrate onto the subject property. However, based on a review of the DEQ project folder for the UPS site, and the City of Portland Fire Prevention Bureau permitting information, it appears that the current active fuel tanks are only approximately eight years old. According to UPS's Environmental Manager (Ms. Janeen Adamo), they plan to remove the two underground fuel tanks in the near future and replace them with above ground tanks.

## **8. PA CONCLUSIONS**

Evergreen Environmental Management, Inc. (EEM) has completed a Preliminary Assessment (PA) for the Fred Devine Diving & Salvage (FDDS) facility located at 6211 N. Ensign Street in Portland, Oregon. The PA was conducted to provide information to the Oregon Department of Environmental Quality (DEQ) in regard to the agency's identification of potential sources of contamination to the Willamette River in respect to the Portland Harbor Superfund Listing. Discussion of potential on and off site pathways to the Swan Island Lagoon and Willamette River is undertaken in Section 8.

After completing field and office research, EEM concluded that:

- The entire facility appears to have been well maintained. Overall it appeared that FDDS has and continues to conduct prudent site maintenance practices in respect to situations that might generate potential environmental liability.
- All three underground storage tanks were removed from the site in 1993. The tank decommissioning documentation indicated that no petroleum impacted soil was found beneath the tanks. No other buried tanks remain at the site.
- The approximately 400 gallon three chamber oil/water separator located in front of the warehouse structure is seldom used and appears to be in very good condition. It is pumped empty and cleaned once a year and it has always been isolated from the sanitary sewer system by a shutoff valve. The current use and condition of the device does not appear to generate any potential environmental liability.
- Utilization of the dock by FDDS and several private motor and sailing vessels does not appear to present obvious or unusual environmental liability issues.
- The six catch basins throughout the property which are connected to the storm sewer system appear to be clean and well maintained. Each device contains absorbent material to trap petroleum and other similar contaminants.
- With respect to potential asbestos issues, the construction materials in the office building did not appear to be typical of materials that might contain asbestos. All of these materials appeared to be in good condition and no obvious exposure hazard was evident.



- With respect to potential lead based paint issues, considering the age and commercial use of the office and warehouse buildings, it is possible that lead based paint has been used on them. However, no indications of the degradation of the paint such as peeling or flaking were observed at the site. Therefore, there does not appear to be an exposure hazard.
- In regard to potential pathways of contaminants to the lagoon or river from the subject property, EEM believes there are only two direct pathways. These are from the catch basins into the storm sewer system, and from spills or releases from vessels tied up to the FDDS dock (Figure 4). Both potential pathways have been and are closely monitored and managed to prevent any petroleum or other contaminants from impacting the lagoon or river.

## 9. RECOMMENDATIONS

### Portland Harbor Superfund Listing

In regard to DEQ's request for FDDS to generate a Scope of Work for the collection of site characterization soil, sediment and/or groundwater samples based on the determination of potential contaminant pathways to the lagoon and river, based on a review of the current and historical uses of the FDDS property, EEM firmly does not believe that the subject property has been or is a source of petroleum hydrocarbons or other types of contamination to the sediments in the lagoon or river. Therefore, EEM does not recommend that any type of intrusive sampling be conducted at the site. Please refer to Sections 8.0 and 9.0 for text regarding this subject.

### Catch Basins and Storm Sewer System

The catch basins and the storm sewer system represent the only direct potential pollutant pathway to the lagoon from the land portion of the property. Therefore, EEM recommends the following actions be taken by FDDS to minimize or eliminate any potential release of petroleum products or chemicals to the storm sewer system.

- All inactive equipment which is stored inside and outside the structures that contain fuel, significant reservoirs of lubricating oil and other potential hazardous liquids should be drained to prevent accidental releases.
- All 55 gallon drums and smaller containers of petroleum products, chemicals and paints should be placed in or on top of spill containment devices that will capture any accidental release of fluids.
- Highly visible spill response kits should be placed at several readily accessible locations.
- A Spill Prevention and Response Plan should be generated and made available to all employees.

### Docking Facility

The use of the dock, which was built in 1984, represents the most direct potential pathway for pollutants into Swan Island Lagoon and the Willamette River. The east side of the dock is currently used by three motor vessels and one sailing boat for moorage. The west side of the dock is used by FDDS for mooring boats and barges used in their diving and salvage work. With respect to the dock, EEM recommends:

- FDDS maintain strict guidelines for the vessels and barges that utilize the dock to prevent any discharge of potential contaminants such as petroleum products, paint debris and solid waste into the lagoon.
- No materials should be stored on the dock and walkway that may release any potential pollutants into the lagoon.
- Highly visible spill response kits should be placed at readily accessible locations on the upper and lower dock.

### Structures

With regard to the office and warehouse structures, EEM recommends:

- As a standard precaution, prior to any demolition or construction activities at the site, any suspect materials should be sampled and submitted for laboratory analyses to determine if the substances contain asbestos. If asbestos is present in materials to be removed then the material should be addressed in an appropriate manner to eliminate exposure risks. This may include removal by qualified asbestos removal workers.
- If any sections of the buildings are altered by demolition or construction activities, EEM recommends that all suspect materials be sampled and analyzed for lead content to insure safe working conditions and to determine proper debris disposal options.

#### **10. DISCLAIMER**

The intent of this study was to establish an environmental baseline relative to the present conditions occurring at the site; to identify areas where gross chemical contamination may have occurred on the site; and to identify any contamination that has occurred on adjacent properties which could adversely affect the property in question. It must be recognized that this assessment was prefatory in nature and, as a consequence, it is possible that contamination was present at the site even though no contamination was discovered during the investigation. A more extensive assessment would be required to quantitatively define the presence or absence of specific contamination at the site.

Information has been gathered from past and present owners and occupants of the subject property in addition to several state, city, and local governmental agencies during this assessment. Evergreen Environmental Management, Inc. has reported this information as supplied by the owner and these agencies, and accepts no liability as to its accuracy.

This assessment was conducted expressly for Fred Devine Diving & Salvage, Inc. The use of the information provided in this report with respect to the disposition of said property is the sole responsibility of Fred Devine Diving & Salvage, Inc.

## **11. REFERENCES**

Mick Leitz, President, Fred Devine Diving & Salvage, Portland, OR, February, March and April 2001, site visits and personal communications.

Marvin Smith, General Manager, Fred Devine Diving & Salvage, Portland, OR, February and March 2001, site visits and personal communications.

Sabrina Alberg, Environmental Technician, Industrial Storm water Section, Portland Bureau of Environmental Services, March 21, 2001, telephone conversation.

Janeen Adamo, Environmental Compliance Specialist, United Parcel Service, Portland, OR, March and April 2001, written communications and telephone conversations.

John Childs, Environmental Project Manager - Marine Operations, Port of Portland, March and April 2001, personal communications.

John McGregor, Spill Protection & Citizen Response Supervisor, Portland Bureau of Environmental Services, June 26, 2001, personal communications,

City of Portland Records Dept., staff personnel, Portland, OR, February 2001, personal communication and file review.

State Fire Marshall's Office., staff personnel, Salem, OR, June 2001, personal communication.

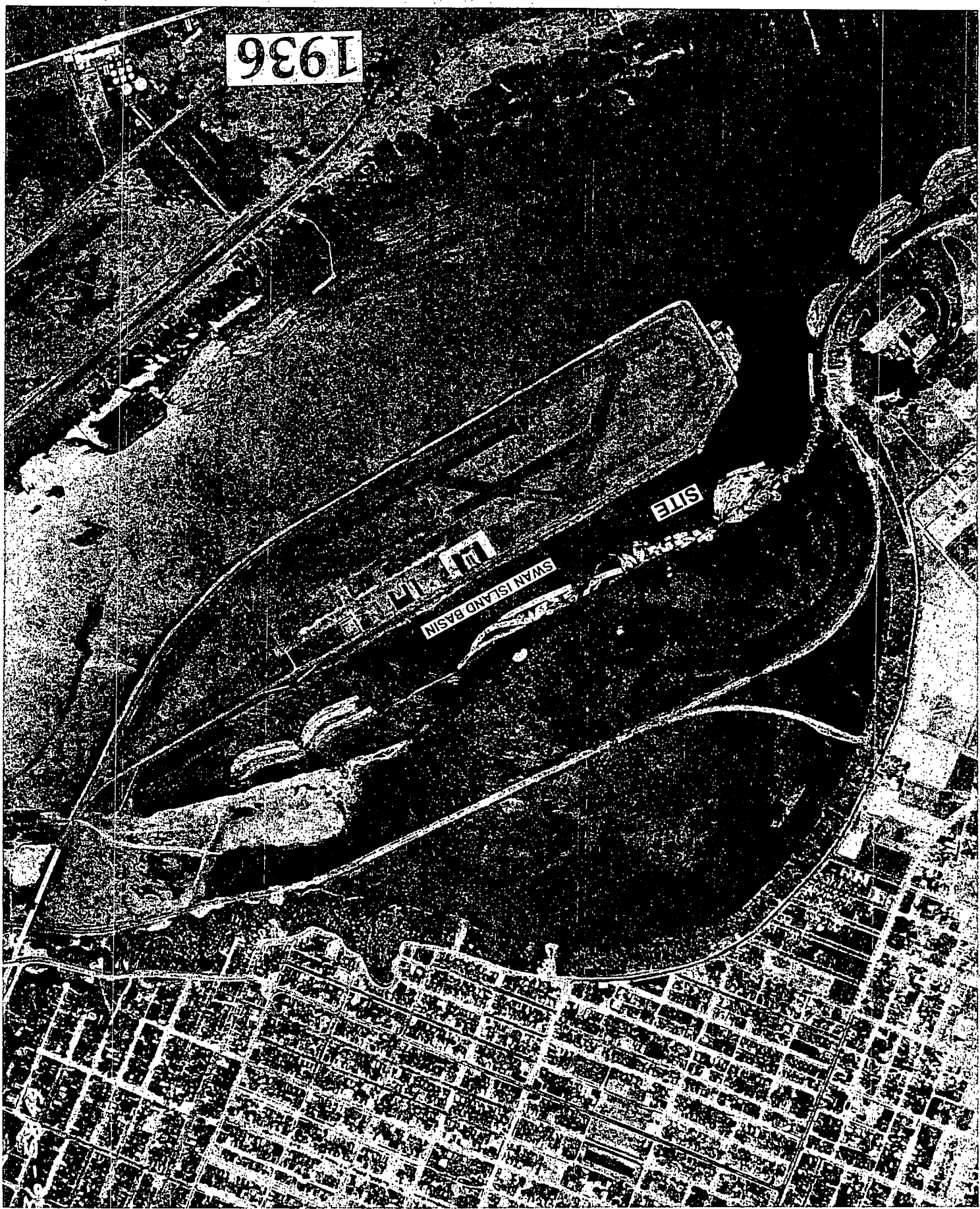
Rebecca McNamara, Administrative Staff, Portland Fire Prevention Bureau, Portland, OR, March 2001, personal communication.

Fidelity National Title Insurance Co., staff personnel, Portland, OR, February 2001, personal communication.

1936

SITE

SWAN ISLAND BASIN

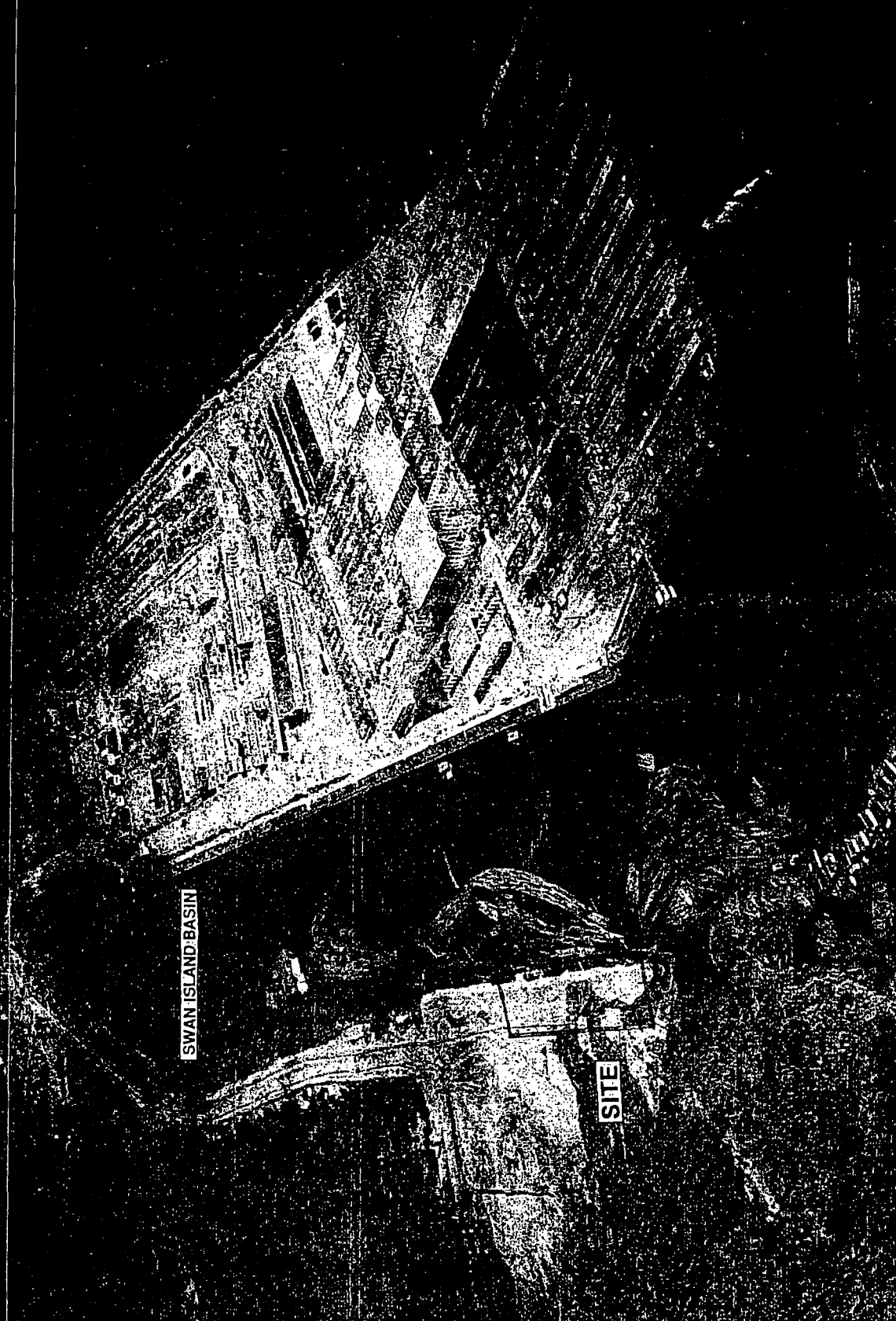


DREDGE

SWAN ISLAND BASIN

SITE

1942





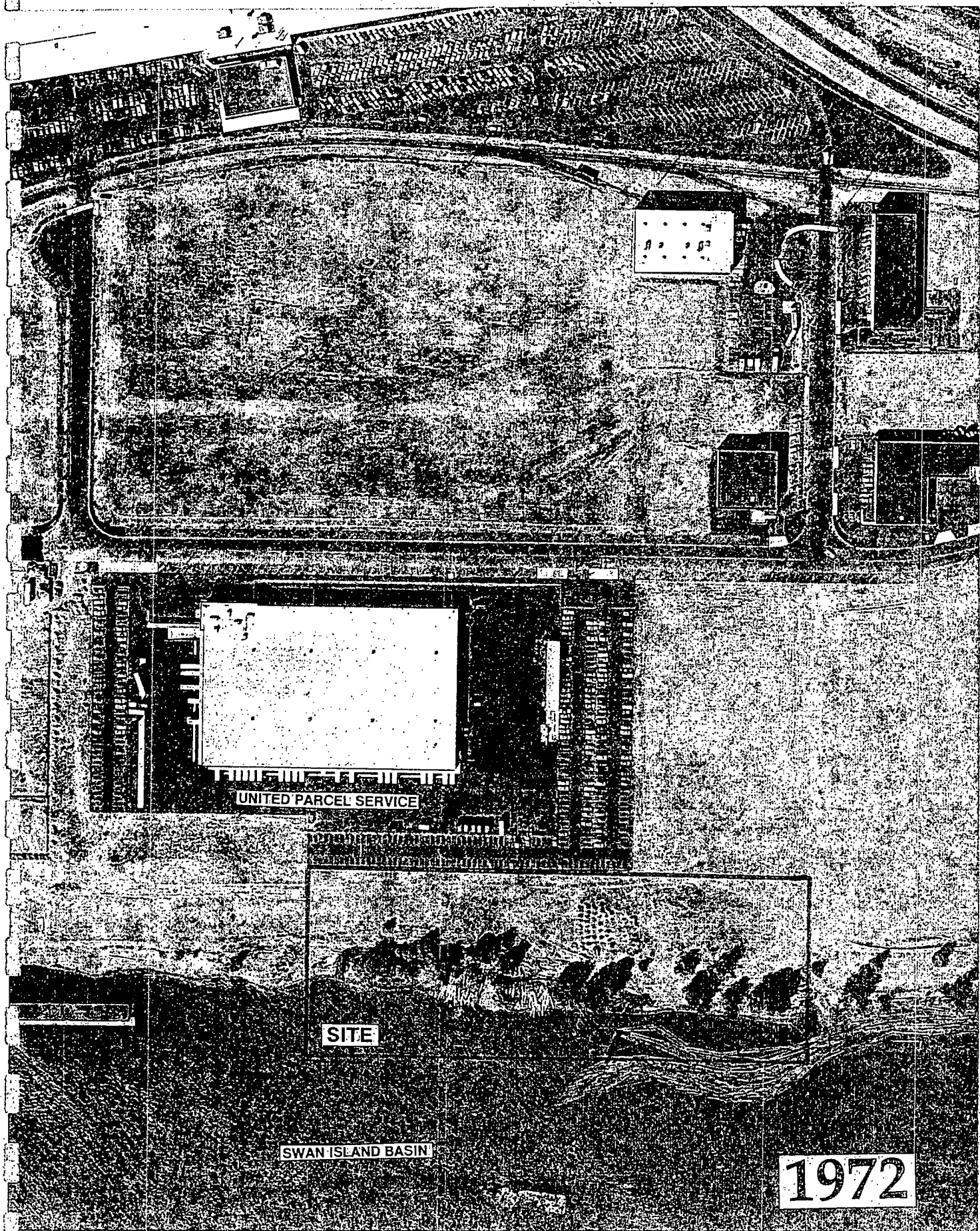
WORLD WAR II PARKING LOT

SITE

1957

SWAN ISLAND BASIN



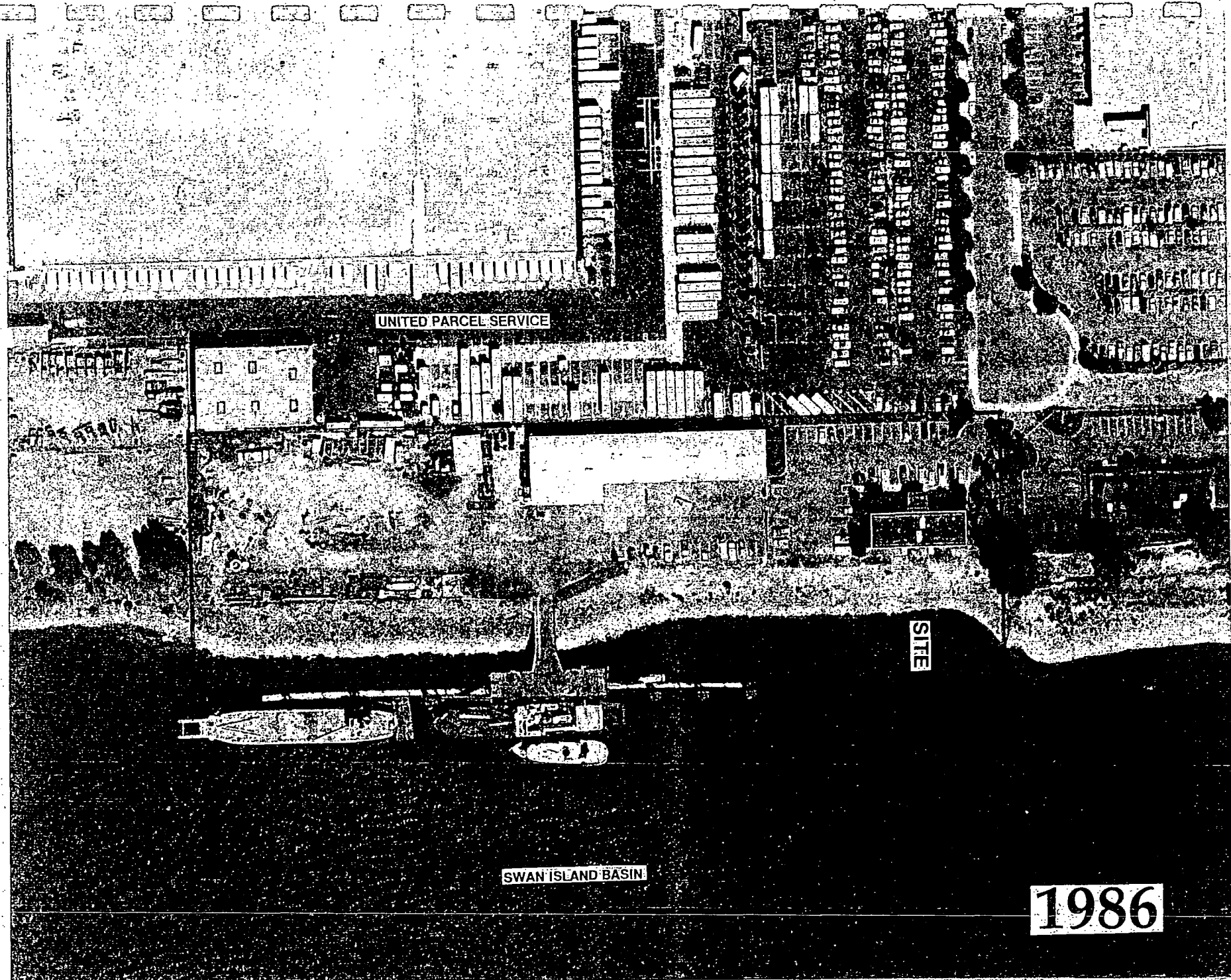


UNITED PARCEL SERVICE

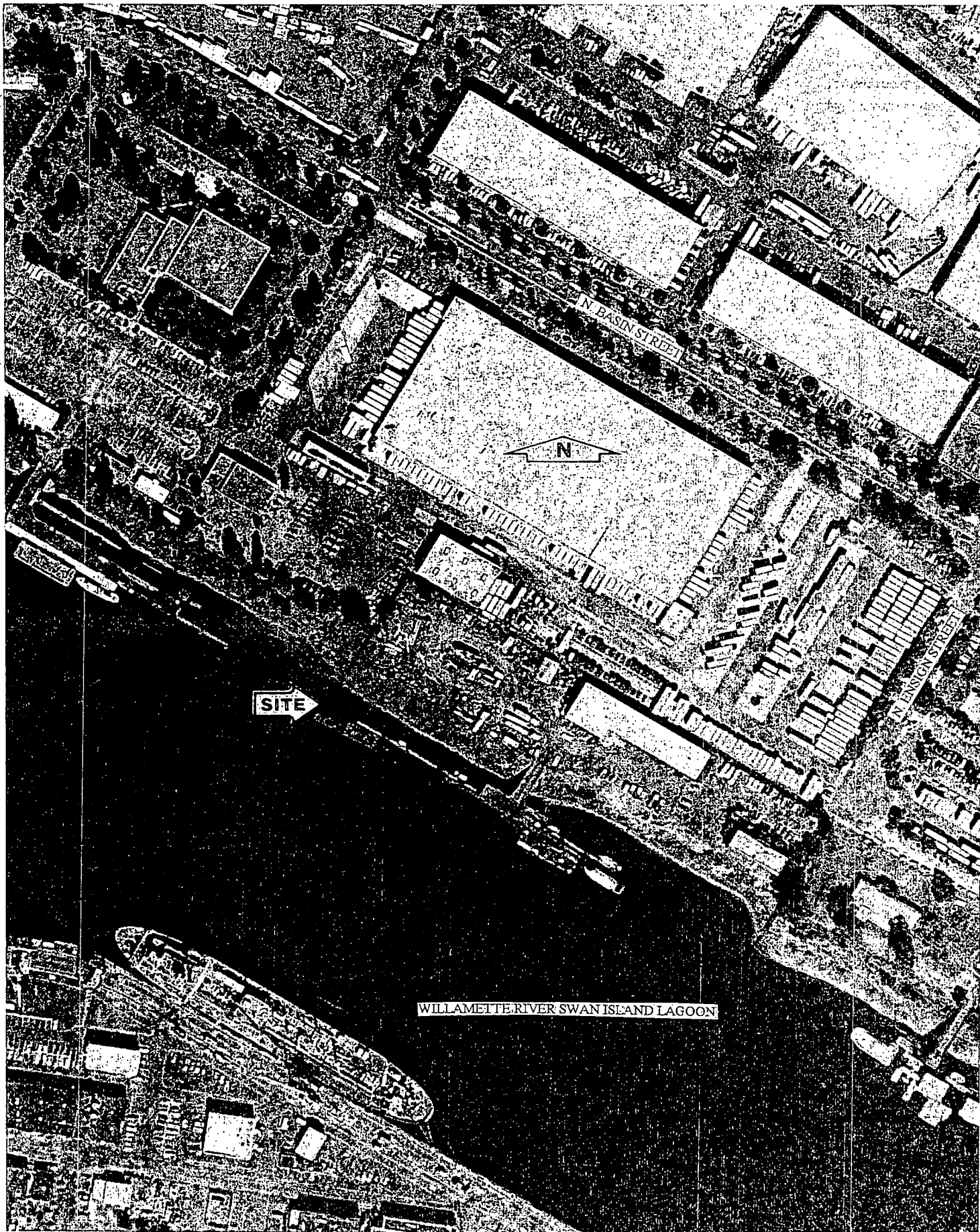
SITE

SWAN ISLAND BASIN

1972



1986



AERIAL PHOTOGRAPH - SEPTEMBER 16, 1994